



# **INTERNATIONAL SOYBEAN VARIETY EXPERIMENT**

**FIRST REPORT OF RESULTS**

D.K. Whigham



International Soybean Program

**INTSOY**

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UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN







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University of Illinois at Urbana-Champaign  
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## FOREWORD

The International Soybean Program (INTSOY) is a cooperative program of the University of Illinois at Urbana-Champaign and the University of Puerto Rico, Mayaguez Campus, cooperating with international and national organizations to expand the use of soybeans for human food. INTSOY is primarily oriented to improve soybean production and utilization in the developing nations of the tropics and sub-tropics where protein-calorie deficiencies are the most serious.

The purpose of the first phase of the soybean improvement program was to initiate evaluation of available soybean varieties to determine their adaptability in localities where they had not previously been cultivated. To accomplish this evaluation the International Soybean Variety Evaluation Experiment (ISVEX) was organized.

This is the first of a series of publications to report the results of the International Soybean Variety Evaluation Experiments. Future publications will report results from succeeding experiments which will include additional varieties to be tested at sites mentioned herein plus many new environments.

Seed and materials for the experiment were prepared and distributed by INTSOY at the request of scientists desiring to evaluate soybeans in their environment. Each of these cooperators provided the land, labor, fertilizer, and management necessary for the experiment. These cooperators were responsible for the success of the experiment and we express our thanks and appreciation to each person and his organization. The support provided by the Food and Agriculture Organization of the United Nations and the International Rice Research Institute for shipment of seed and materials to selected countries is gratefully acknowledged.

INTSOY expresses its appreciation to the U. S. Agency for International Development for financial and other support of the work reported in this publication. Many organizations and persons made contributions but special appreciation is due two persons: D. Keith Whigham for his leadership and organization abilities in establishing the ISVEX program and Lorena Neumann, INTSOY Publications Series manuscript editor and production chief.

WILLIAM N. THOMPSON

Director  
International Soybean Program (INTSOY)







## INTERNATIONAL SOYBEAN VARIETY EVALUATION EXPERIMENT First Report of Results

The International Soybean Variety Evaluation Experiment (ISVEX) was tested in 1973-1974 at 60 sites in 27 countries. The experiment included 20 varieties of soybean [Glycine max (L.) Merrill] from the United States which represented maturity groups I through IX and were selected because of their high-yielding ability in their area of adaptation. The varieties represented a wide range of genotypic and phenotypic characteristics as well as some resistance to known pests. One or more local varieties were substituted into the experiment at many locations to compare their performance level.

The ISVEX was designed to: (1) test the adaptation of soybean varieties under a wide range of environmental conditions; (2) provide research workers an opportunity to compare local and introduced varieties; (3) provide a source of new germplasm which the cooperator may use directly or incorporate into his breeding program; (4) identify areas of the world that have a potential for soybean production; and (5) evaluate the response of the soybean to different environments.

The demand by many countries to identify and/or develop better-adapted soybean varieties led to the testing of soybean varieties in 10 countries between 1970 and 1972 by the University of Illinois (3). Encouraging yield results from the early trials led to the organization of the International Soybean Program (INTSOY) at the same university. The International Soybean Variety Evaluation Experiment is a part of the INTSOY program.

### MATERIALS AND METHODS

#### Soybean Varieties

The 20 soybean varieties tested in the first ISVEX are listed in Table 1. The entries were selected from United States varieties in order to provide access to adequate quantities of seed. Certified or foundation seed was purchased from sources in the area of the United States where each variety was grown. The varieties were selected for their consistent high-yield performance for several years in the U.S. Department of Agriculture Regional Soybean Trials originating from Urbana, Illinois,

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and Stoneville, Mississippi. At least one variety from each maturity group I through IX was selected. Additional varieties were selected for their performance in previous tests conducted in other countries.

#### Procedure

Seed of the 20 varieties was distributed to each cooperator requesting the experiment. Fresh inoculant was provided for treatment of the seed prior to planting. Instructions for management and data collection were sent to each cooperator. The experiment was designed as a randomized block with four replications. Each plot consisted of four rows 6 m long. Five meters of the two center rows were harvested. Rows were spaced 60 cm apart, except where the use of mechanical equipment prohibited the recommended spacing. The plots were overseeded and thinned to a plant population of 400,000 plants/ha (24 plants/m). (Unfavorable conditions during the distribution period reduced the germination to less than adequate for some varieties at a few locations.)

#### Experiment Sites

In 1973 many national and international organizations were notified that the experiment was available. Requests for cooperation were received for 90 sites and 33 countries. None of the sites were in the United States. A list of sites that completed the experiment and returned data to INTSOY is found in Table 2 and Figure 1 shows the location of the countries. The experiment was tested under a wide range of environmental conditions representing the latitude range of 30° S to 35° N and altitude from 9 m to 1803 m. Environment also dictated the optimum planting time for each site and plantings were made during each month of the year. Several sites tested the experiment in more than one season of the year.

The test sites were divided into "environmental zones," determined by units of 10° latitude and 500 m altitude, to identify a reasonable limit to the environmental range. There was considerable variation within each zone for temperature, moisture and radiation. The limits of the zones and number of locations in each are shown in Table 3.

#### Data Collected

Instructions for management and data collection were sent to each cooperator to reduce variation in method among sites. General information about the site and the experiment was returned to INTSOY, including details of latitude, eleva-



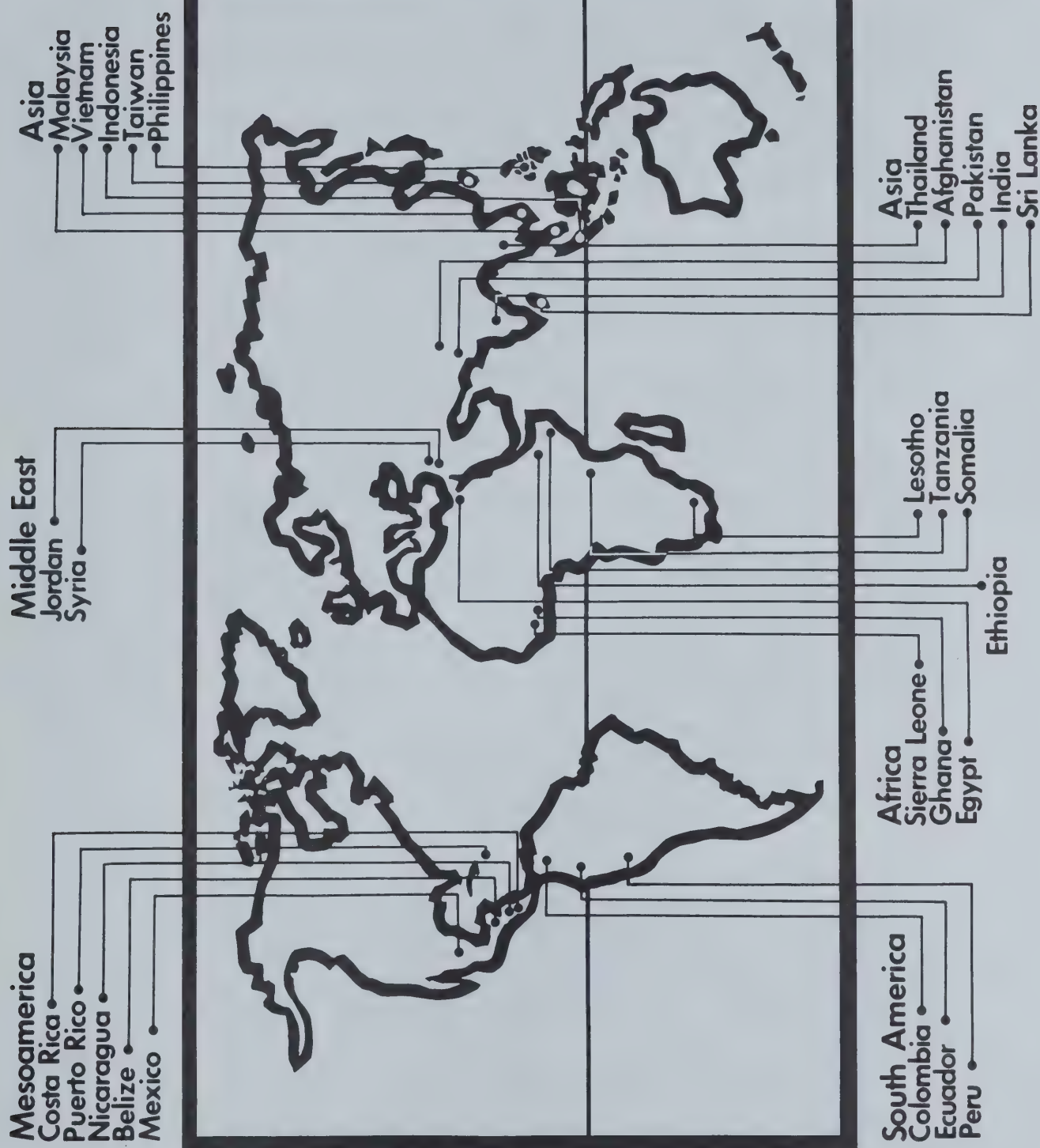


Figure 1. Countries from which data were collected in the first International Soybean Variety Evaluation Experiment (ISVEX).



tion, and soil conditions of the site, plus date of planting and harvesting, amount of moisture, fertilizer used, local varieties tested, and diseases and insects of the environment. Data were reported for each plot by cooperators as follows:

Yield: Weight in grams of clean harvested grain from 5 m of each of the two center rows.

Seed Weight: Weight in grams of 100 randomly selected seeds.

Days to Flower: Days from date of planting to date when 50 percent of the plants have flowers.

Days to Maturity: Days from date of planting to date when 95 percent of the pods are ripe.

Canopy Height at Flower: Height in centimeters from the ground to the top of the canopy at time of flowering.

Plant Height at Maturity: Height in centimeters from the ground to the top of the main stem at maturity.

Lodging Score: Estimated rating of lodged or down plants on a scale of 1 (all erect) to 5 (all down) at maturity.

Shattering Score: Estimated rating of shattering or loss of seed from the pod on a scale of 1 (none) to 5 (over 50 percent) at maturity.

Analyses of variance were completed for variables for which data were reported from more than one replication at each site during the same season. Means, standard error of treatment means, coefficients of variation, and the least significant difference (LSD) at the 5 percent level are reported for analyzable variables from each experimental site.

#### Protein and Oil Content

Composite seed samples of varieties tested were returned to INTSOY for protein and oil analyses from many locations. Other locations returned the results of analyses conducted locally. All samples returned to INTSOY were analyzable by the near-infrared light reflectance instrument, coupled to an analog computer, in the Department of Agronomy at the University of Illinois (2).

#### RESULTS AND DISCUSSION

Zones I, IV, and VII included a sufficient number of sites for the determination of correlation coefficients as shown in Table 4. Locations with a coefficient of variation greater than 30 were not included in the correlations and data summaries for each zone.

Results of the performance of the U.S. varieties and the

local entries, when included, are reported for each ISVEX site in Tables 13-72. The results are arranged by region, country, and location. The tables include general information about each site, mean variable values for each variety, grand means for each variable, standard error of a variety mean, coefficient of variation, and the least significant difference values at the 5 percent level.

## YIELD

The mean yield of all varieties at the 60 sites was 1606 kg/ha, which included many varieties that were unadapted at given locations. The lowest individual site mean was 140 kg/ha at Darlac Province, Vietnam. The highest reported mean was 3620 kg/ha at Chiapas, Mexico. Mean yields of greater than 2000 kg/ha were reported from 22 sites, and 21 sites reported yields of less than 1000 kg/ha. Local varieties produced the highest yield at five sites.

Variety mean yields for zones I, IV, and VII are presented in Tables 5, 6 and 7, respectively. The overall mean in zone I was 1760.4 kg/ha. Variety Hardee produced the highest mean yield of 2046.6 kg/ha. Hark had the lowest mean yield with 1428.6 kg/ha. The overall mean for zone IV was 1642.4 kg/ha. The variety mean yield ranged from 1928.4 to 1500.7 kg/ha for varieties Hardee and Bonus, respectively. In zone VII the highest-yielding variety was Cutler 71 with 1842.5 kg/ha and the lowest-yielding variety was Hutton with 1112.0 kg/ha. Zone VII had an overall mean yield of 1409.0 kg/ha. The summary tables for zones I, IV, and VII include 15, 14, and 5 sites, respectively. Latitude increased 10° between zones I, IV, and VII and elevation remains the same (<500 m). Mean yield values decrease as latitude increases to 30°.

Table 8 shows the results for the most consistent high-yielding varieties in zones I, IV, and VII. The varieties represented were among the five highest-yielding varieties at each site. Hardee produced a high yield at 73 percent of the sites in zone I, followed by Bragg, Williams, Hampton 266A, Davis, Improved Pelican, and Adelpia. In zone IV, Hardee and Davis ranked highest at 50 percent of the sites. The varieties Improved Pelican, Calland, Clark 63, Williams, Jupiter, and Cutler 71 also were frequently among the top five varieties in zone IV. Pickett 71 was most frequently reported as the highest-yielding variety in zone VII, followed by Williams, Clark 63, Bonus, Harosoy 63, Semmes, and Lee 68.

The zones represent different ranges in latitude, but include the same range in elevation (<500 m). Low temperature is not a limiting factor to soybean production in any of the three zones. Rainfall patterns, or the



availability of irrigation water, determined the seasons in which soybeans were grown. Changes in latitude affect the daylength, which varies with the month of the year. The photoperiods with a minimum intensity of 10.8 lux for the latitude limits of the zones are (4):

<u>Latitude</u>	<u>Hours-Minutes</u>	
	<u>Minimum</u>	<u>Maximum</u>
0°	12'36"	12'40"
10°	12'06"	13'16"
20°	11'31"	13'56"
30°	10'51"	14'44"

The minimum and maximum photoperiods occur in June and December depending on location of the site at N or S latitude. However, at 0° the minimum occurs in March and September and the maximum in June and December.

The variety Hardee was best adapted at sites less than 20° latitude and 500 m elevation. Davis, Williams, and Improved Pelican also were consistent varieties in the two zones. Bragg, Hampton 266A, and Adelpia were better adapted to zone I, whereas varieties Calland, Clark 63, Jupiter, and Cutler 71 were better adapted to zone IV. In zone VII, which had fewer sites than zones I and IV, the variety Pickett 71 was the most consistent high-yielding variety for the zone. The varieties Williams, Clark 63, Bonus, Harosoy 63, Semmes, and Lee 68 also were adapted in zone VII. Williams is the only variety with reasonable adaptability in all three zones.

Zones I, IV, and VII each had five or more sites with coefficients of variation less than 30. Correlation coefficients (Table 4) indicate a highly significant positive correlation between yield and seed weight, and between yield and plant height, in zones I, IV, and VII. Days to maturity was positively correlated with yield at a significant level in zones I and VII, but showed no significant correlation in zone IV. Planting date was significantly correlated with yield only in zone VII. All sites in zone VII were planted either in March or July for this experiment. Planting date and days to flower were negatively correlated with yield at a significant level in zones I and IV, as was days to flower in zone VII.

#### SEED WEIGHT

In some cultures large soybean seed is preferred by the consumers. However, reports have been received that small-seeded varieties maintain higher viability than large-seeded varieties during storage in warm, humid



environments. The weight of 100 seeds varied among varieties from 13.5 g for Improved Pelican to 18.1 g for Hutton. The mean seed weight for the experiment was 16.0 g/100 seeds. The range in mean seed weight among sites was from 8.9 g/100 at Darlac Province, Vietnam, to 24.7 g/100 at Boliche, Ecuador.

The overall mean seed weight decreased as latitude increased. One-hundred-seed weight values were 17.6, 15.6, and 13.5 g for zones I, IV, and VII, respectively. The largest-seeded variety in zone I was Hutton with 19.5 g/100 seeds, whereas the smallest-seeded varieties were Hark and Improved Pelican with 15.3 g/100 seeds. In zone IV the largest seeds were produced by the variety Cutler 71 with 17.3 g/100 seeds, and Improved Pelican again produced the smallest seeds with only 12.0 g/100 seeds. In zone VII, Cutler 71 again produced the largest seeds and Improved Pelican produced the smallest seeds with 19.4 and 10.2 g/100 seeds, respectively.

In addition to yield, seed weight was positively correlated with days to maturity in zones I and VII, and with planting date in zone VII (Table 4). A significant negative correlation was found between seed weight and days to flower in zones I, IV, and VII. The same correlation exists between seed weight and plant height in zone IV. In zones I and VII a relationship exists between seed weight and the difference between days to flower and days to maturity. The longer the period between flowering and maturity, the greater the opportunity for producing larger seed. Larger seeds were associated with higher yields in all zones where correlations were computed.

#### DAYS TO FLOWER

The mean days to flower for the 20 varieties among locations was 36.6 days. Njala, Sierra Leone, reported the lowest site mean of 24.5 days to flower compared with 86.8 days at Douma, Syria. Variety Hark flowered in 31.9 days and Improved Pelican in 42.2 days as a mean of all sites. Table 9 shows the mean days to flower for varieties in zones I, IV, and VII. The number of days to flower increased as latitude increased, as a mean of all varieties. Jupiter was the latest-flowering variety in zones I and IV. Hill was the latest to flower in zone VII. The earliest-flowering varieties in zones I, IV, and VII, respectively, were Hark, Harosoy 63, and Calland.

Days to flower were negatively correlated with yield, seed weight, days to maturity, plant height, and planting date at the highly significant level in zone VII. The same

negative correlation was true for yield and seed weight in zones I and IV. A significant positive correlation existed between days to flower and days to maturity in zones I and IV, and between days to flower and plant height in zone IV.

#### DAYS TO MATURITY

The range in days to maturity among site means was 72.1 days at Ratmalagara, Sri Lanka, to 169.9 days at Deir Alla, Jordan. The overall mean was 100.2 days to maturity. The variety that matured earliest was Hark with a mean among sites of 90.0 days. Variety Jupiter took the longest time to mature with a mean of 111.8 days among all sites. The mean days to maturity for all varieties in zones I, IV, and VII were 89.2, 98.3 and 99.3, respectively (Table 10). The number of days to maturity increased as latitude increased for 17 of the 20 varieties tested. The exceptions were Bonus, Hampton 266A, and Hardee, which took longer to mature in zone IV than in zone VII. Longer days associated with the higher latitudes during the summer months are assumed to be partially responsible for the increase in days to maturity with increased latitude. The differences between overall mean days to flower (Table 9) and days to maturity (Table 10) within zones I, IV, and VII also showed an increase in days, from first flower to maturity, as latitude increased.

The value for days to maturity was positively correlated with plant height at a highly significant level in zones I, IV, and VII. The longer the plants were in the field before maturity, the taller they grew. The value for days to maturity was not correlated with planting date in zone IV, but was positively correlated in zone VII and negatively correlated in zone I. As previously indicated the value for days to maturity was positively correlated with yield and seed weight in zones I and VII, but there was no significant correlation in zone IV.

#### CANOPY HEIGHT AT FLOWER

Canopy height at flower was measured to indicate height development after flowering. Values recorded for canopy height at flower were often greater than those of plant height at maturity because individual plants were not measured in the first instance.

The overall mean canopy height at flower was 34.9 cm, with the range from 15.9 cm at La Molina, Peru, to 68.7



cm at Awassa, Ethiopia. The mean canopy heights for zones I, IV, and VII were 33.8, 32.1, and 24.8 cm, respectively (Tables 5, 6, 7). Improved Pelican was the tallest variety at flowering in zones I and VII and Jupiter was the tallest in zone IV.

#### PLANT HEIGHT AT MATURITY

Plant height at maturity ranged from 23.7 cm at Afgoi, Somalia, to 93.5 cm at Swat, Pakistan, with an overall mean of 43.1 cm. Plant height increased as latitude increased. The mean plant height increased from 38.8 cm in zone I to 39.4 cm in zone IV and 45.9 cm in zone VII (Tables 5, 6, 7). The variety Improved Pelican was the tallest variety in zone I (Table 5) and zone IV (Table 6) at 64.8 and 65.1 cm, respectively. The tallest variety in zone VII (Table 7) was Jupiter at 72.9 cm. The ten tallest varieties in zones I, IV, and VII include 9, 8, and 5 indeterminate varieties, respectively. Jupiter was the determinate variety that grew tallest in each zone. The mean plant heights for determinate varieties in zones I, IV, and VII are 34.7, 36.1, and 46.1 cm, respectively (Table 11). The indeterminate varieties had a mean plant height of 44.2, 44.9 and 48.0 cm for zones I, IV, and VII, respectively. Both plant types increased in plant height as latitude increased and the indeterminate varieties were taller than the determinate varieties. The difference between canopy height at flower and plant height at maturity for both growth types is compared in table 11. In zones I and IV the determinate varieties grew only slightly taller after flowering began, but the indeterminate varieties grew more than 10 cm in each zone. In zone VII the indeterminate varieties were taller, but the difference between determinate and indeterminate varieties was not as great as at lower latitudes.

Plant height at maturity had a positive significant correlation with yield and days to maturity in zones I, IV, and VII (Table 4). The same relationship existed with planting date in zone VII and days to flower in zone IV. A significant negative correlation existed between plant height at maturity and planting date in zone I, and between plant height at maturity and seed weight, in zone IV, and between plant height at maturity and days to flower, in zone VII. The positive correlation between plant height and yield indicates that larger plants produced larger yields in each zone examined. Plant height was positively correlated with days to maturity indicating that the plants generally grew taller when the season was extended.

## LODGING

Lodging was measured to determine the desirability of a variety for use in a given environment without seed loss or damage due to down plants. The overall mean lodging score was 1.42 of the range from 1 (no lodging) to 5 (completely lodged). Several locations found no lodging in the experiment and therefore recorded no data. The highest lodging score reported was 2.5, or between 25 and 50 percent of the plants down, at Legon, Ghana. Lodging was most severe in zone I with a mean score of 1.35, followed by zone VII, with 1.23, and zone IV with 1.16 (Tables 5, 6, 7). Improved Pelican had the highest lodging score in zone I at 2.02. Jupiter and Hark had the highest scores in zones IV and VII with 2.10 and 1.67, respectively. In general, lodging was not severe during this experiment because most of the varieties tested do not ordinarily develop tall, weak plants.

## SHATTERING

The ability of plants to hold their seed during and after maturation is a desirable trait. Varieties were rated on a scale of 1 (no shattering) to 5 (more than 50 percent shattered) to evaluate this characteristic. Several locations reported no shattering and did not score each plot for analysis. The overall mean shattering score for those sites reporting data was 1.22 and the maximum location mean was a score of 2.0, at Douma, Syria. The most severe shattering in zone I occurred with Cutler 71 which had a score of 1.22 (Table 5). Harosoy 63 and Davis varieties had scores of 1.25 which were the highest in zone IV (Table 6). Harosoy 63 had the highest score in zone VII also with 1.25 (Table 7). The amount of shattering was low in all zones but timely harvest was essential nevertheless, to prevent severe seed loss.

## PROTEIN AND OIL

An inverse relationship usually occurs between the protein and oil content of the same seed sample. Soil fertility is known to influence the protein content of soybean (1). Seed samples of each variety from each site were analyzed for protein and oil content by INTSOY at the University of Illinois or, in a few instances, by laboratories in the country where samples were grown. Table 73 shows the results of the analyses, with asterisks indicating analyses made in the country where samples were grown. Some sites provided material from two seasons in the same year.



The highest protein content measured on samples of seed returned to INTSOY was 51.0 percent for Pickett 71 grown at Mayaguez, Puerto Rico. The corresponding oil content of the same seed sample was 22.2 percent. The yield of Pickett 71 during the test was low (383 kg/ha). Hill variety grown at Chiapas, Mexico, had 30.5 percent protein content, which was the lowest analyzed, and an oil content of 29.2 percent. Yields reported from Chiapas were high and the protein content was consistently low relative to other sites. Hill was the lowest-yielding variety (2452 kg/ha) at Chiapas. The variety with the highest protein content for a mean of the 29 sites analyzed at the University of Illinois was Hutton with 43.1 percent and 22.8 percent oil (Table 12). Hutton ranked 18, 13, and 20 for yield in zones I, IV, and VII, respectively (Tables 5, 6, 7). The variety with the lowest mean protein content was Hampton 266A with 39.1 percent and 23.7 percent oil. The overall mean protein content was 41.4 percent. In zone I the mean protein content was 41.1 percent. The highest variety mean was Hutton with 43.2 percent and the lowest was Hark with 39.6 percent. Hutton had the highest mean protein content in zone IV with 42.8 percent. The lowest mean was 38.7 percent in Hill. The grand mean for protein in zone IV was 41.0 percent.

The overall mean oil content was 23.8 percent. The highest variety mean was 24.9 percent for Dare with a corresponding protein content of 40.1 percent. Hutton had the lowest oil content with 22.8 percent and a corresponding protein content of 43.1 percent, which was the highest mean protein value. The highest mean oil content in zone I was 25.1 percent in Hampton 266A and Dare. Hutton had 23.4 percent oil for the lowest content. Zone IV had a high mean oil content of 26.8 percent in Hark and a low of 23.4 percent oil in Hutton. The grand mean for oil content in zones I and IV was 24.4 and 24.5 percent, respectively. The variety with the highest oil content for an individual site was Bonus when grown at Chiapas, Mexico, with 31.5 percent oil and 32.9 percent protein. As mentioned above, the protein content for all varieties was low at Chiapas and all oil levels were correspondingly high. Njombe, Tanzania, was the site that produced the lowest oil content with Improved Pelican at 15.8 percent oil and 44.8 percent protein. The Njombe site was located at 1800 m elevation and the yield of Improved Pelican was only 40 kg/ha. The oil content of all varieties at that site was less than 20 percent.

#### DISEASES AND INSECTS

Many fungi, bacteria, viruses, nematodes, and insects

are associated with soybeans. Many of these can cause serious losses in plants and in grain yield. Identification of the diseases and insects was made by the local cooperator at each site. Scientific names of pests are included in data for the respective sites.

#### SUMMARY

Within the environmental limits of the experimental fields from the equator to 30° latitude and less than 500 meters altitude, the mean values for each designated experimental zone indicate that yield and seed weight decreased as latitude increased. The number of days to flower and days to maturity increased as latitude increased. Canopy height at flowering decreased, but plant height at maturity increased, as latitude increased. However, plant height was less than optimum in all zones. Lodging decreased as latitude increased, but was not a serious problem at any site. Shattering was not severe in any zone.

Future experiments will provide more evidence for determining the adaptability of soybeans at sites throughout the world as additional environments are evaluated.

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Table 1. Soybean varieties evaluated in the first International Soybean Variety Evaluation Experiment (ISVEX).

Variety	U.S. Maturity Group	Variety	U.S. Maturity Group
Jupiter	IX	Dare	V
Hampton 266A	VIII	Hill	V
Hardee	VIII	Bonus	IV
Hutton	VIII	Clark 63	IV
Improved Pelican	VIII	Cutler 71	IV
Bragg	VII	Adelphia	III
Semmes	VII	Calland	III
Davis	VI	Williams	III
Lee 68	VI	Harosoy 63	II
Pickett 71	VI	Hark	I

Table 2. Identification of sites where the first International Soybean Variety Evaluation Experiment (ISVEX) was conducted and from which data were returned to INTSOY.

Region	Country	Site	Latitude	Elevation (m)
Africa				
	Egypt	Bahteem	30° 2'N	21
	Ethiopia	Awassa	7° N	1650
	Ghana	Legon	5° 39'N	60
	Lesotho	Ralinku	30° 17'S	1425
	Sierra Leone	Njala	8° N	150
	Somalia	Afgoi	2° N	50
	Tanzania	Ilonga	6° 46'S	503
		Njombe	9° 40'S	1800
Asia				
	Afghanistan	Kabul	34° 33'N	1803
	India	Jabalpur	23° N	393
		Pantnagar	29° 30'N	761
	Indonesia	Bogor	6° S	260
		Citayam	6° S	75
		Jogjakarta	7° S	440
	Malaysia	Serdang	3° N	30
	Pakistan	Mansehra	34° N	1080
		Swat	34° N	1200

Table 2. Identification of sites where the first International Soybean Variety Evaluation Experiment (ISVEX) was conducted and from which data were returned to INTSOY (cont.).

Region	Country	Site	Latitude	Elevation (m)
Asia				
	Philippines	La Carlota City	10°24'N	74
		Los Banos	14°10'N	15
	Sri Lanka	Alutharama	7°30'N	266
		Angunukulapolessa	6°20'N	10
		Bandarawela	7° N	1219
		Gannoruwa	7°15'N	457
		Maha Illuppallama	8° 5'N	138
		Paranthan	9°35'N	10
		Ratmalagara	7° N	30
	Taiwan	Ping Tung	22°30'N	9
		Shanhua	23° N	10
	Thailand	Chiangmai	18°47'N	314
		Khon Kaen	16°36'N	170
		Lop Buri	14°30'N	30
		Maejo	18°14'N	317
		Suwan Farm	14°30'N	300
	Vietnam	Banmethuat	12°41'N	500
Mesoamerica				
	Belize	Central Farm	17°10'N	200
	Costa Rica	Hacienda Tempisque	10°30'N	22
		Taboga	10°21'N	9
	Mexico	Chiapas	14°54'N	40
		Tampico	23° N	50
	Nicaragua	Leon	12°28'N	50
	Puerto Rico	Isabela	18°28'N	128
		Lajas	18° N	30
		Mayaguez	18° N	30
Middle East				
	Jordan	Deir Alla	32°12'N	224
	Syria	Douma	34° N	550
South America				
	Colombia	Palmira	3° N	1000
	Ecuador	Boliche	2°19'S	17
		Pichilingue	1° 5'S	73
		Portoviejo	1° 4'S	44

\* Sites that tested the experiment during two seasons of the year and reported data from both seasons.



Table 3. Description of environmental zones and number of sites in each zone, first International Soybean Variety Evaluation Experiment (ISVEX).

Zone	Latitude	Altitude (m)	Number of Sites
I	$\leq 10^{\circ}59'$	$\leq 500$ m	24
II	$\leq 10^{\circ}59'$	501 - 1000 m	2
III	$\leq 10^{\circ}50'$	$> 1000$ m	3
IV	$11^{\circ} - 20^{\circ}59'$	$\leq 500$ m	19
V	$11^{\circ} - 20^{\circ}59'$	501 - 1000 m	0
VI	$11^{\circ} - 20^{\circ}59'$	$> 1000$ m	0
VII	$21^{\circ} - 30^{\circ}59'$	$\leq 500$ m	5
VIII	$21^{\circ} - 30^{\circ}59'$	501 - 1000 m	1
IX	$21^{\circ} - 30^{\circ}59'$	$> 1000$ m	1
X	$31^{\circ} - 40^{\circ}59'$	$\leq 500$ m	1
XI	$31^{\circ} - 40^{\circ}59'$	501 - 1000 m	1
XII	$31^{\circ} - 40^{\circ}59'$	$> 1000$ m	3

$\leq$  = less than or equal to

$>$  = greater than

Table 4. Correlation coefficients for the seven most consistent varieties in each environmental zone.

	Yield	Seed Weight (g/100)	Days to Maturity	Plant Height (cm)	Planting Date (month)
ZONE I					
Seed Weight	0.65**				
Days to Maturity	0.44**	0.50**			
Plant Height	0.31**	-0.10**	0.23**		
Planting Date	-0.42**	-0.23**	-0.44**	-0.45*	
Days to Flower	-0.29	-0.45	0.18	0.05	0.09
ZONE IV					
Seed Weight	0.41**				
Days to Maturity	0.04**	-0.01**			
Plant Height	0.31**	-0.17	0.40**		
Planting Date	-0.40**	-0.10**	0.04**	-0.13**	
Days to Flower	-0.25	-0.46	0.70	0.29**	0.04
ZONE VII					
Seed Weight	0.66**				
Days to Maturity	0.92**	0.67**			
Plant Height	0.53**	-0.03**	0.67**		
Planting Date	0.52**	0.22**	0.63**	0.30**	
Days to Flower	-0.45	-0.68	-0.31	-0.23	-0.64**

\*\* Significant at the 1% level.



Table 5 . Summary of agronomic data for varieties tested in environmental zone I, first International Soybean Variety Evaluation Experiment (ISVEX).

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score*	Shattering Score**
Hardee	2046.6	17.3	33.1	93.4	35.1	34.7	1.10	1.02
Williams	1965.4	19.1	29.1	86.8	34.7	43.4	1.35	1.00
Davis	1949.5	17.4	32.1	92.1	33.8	33.3	1.14	1.13
Bragg	1851.4	18.0	30.7	89.7	35.7	35.5	1.25	1.04
Hampton 266A	1824.1	19.3	30.1	89.7	32.9	31.9	1.29	1.05
Clark 63	1796.0	17.3	28.5	87.7	33.5	43.9	1.65	1.03
Semmes	1785.5	17.0	29.9	90.4	30.3	28.7	1.14	1.07
Dare	1780.2	17.3	30.6	88.1	33.6	32.5	1.26	1.05
Improved Pelican	1767.3	15.3	35.1	92.9	44.4	64.8	2.02	1.00
Calland	1762.1	19.3	27.9	88.9	29.5	43.3	1.53	1.08
Pickett 71	1750.4	16.9	29.3	89.9	31.8	29.5	1.11	1.09
Cutler 71	1743.9	18.7	26.7	90.0	29.3	43.4	1.81	1.22
Lee 68	1742.9	17.7	29.0	87.8	31.2	29.6	1.19	1.04
Harosoy 63	1738.9	17.6	27.3	83.2	33.1	41.8	1.33	1.07
Bonus	1721.9	18.0	27.6	87.5	32.9	42.2	1.22	1.02
Adelphia	1716.5	17.2	27.9	86.9	32.2	39.0	1.24	1.05
Hill	1645.7	16.8	32.1	86.1	34.9	35.3	1.50	1.02
Hutton	1555.8	19.5	30.5	90.5	29.7	28.2	1.05	1.03
Jupiter	1511.6	17.5	37.3	102.9	43.7	62.4	1.64	1.01
Hark	1428.6	15.3	26.1	78.9	29.4	36.1	1.40	1.11
Grand mean	1754.2	17.6	30.2	89.2	33.8	38.8	1.35	1.05

\*Down plants: 1 = all erect, to 5 = all down, at maturity.

\*\*Seed loss from pods: 1 = none, to 5 = more than 50 percent, at maturity.

Table 6 . Summary of agronomic data for varieties tested in environmental zone IV, first International Soybean Variety Evaluation Experiment (ISVEX).

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score*	Shattering Score**
Hardee	1928.4	15.2	40.1	104.4	33.7	38.4	1.13	1.02
Calland	1871.9	17.1	31.2	94.3	29.8	47.6	1.09	1.03
Cutler 71	1865.8	17.3	34.1	97.5	28.7	47.7	1.36	1.03
Clark 63	1770.0	15.9	32.1	94.3	28.2	44.8	1.07	1.00
Williams	1725.5	16.9	32.5	94.1	27.7	43.4	1.00	1.00
Davis	1712.3	15.9	38.0	103.3	33.3	37.8	1.02	1.25
Pickett 71	1682.1	15.2	33.8	99.9	31.2	31.1	1.04	1.00
Hampton 266A	1662.9	16.4	34.8	99.7	34.4	34.5	1.11	1.00
Hark	1661.8	14.3	29.1	86.1	28.4	37.1	1.08	1.10
Improved Pelican	1653.0	12.0	41.6	101.8	44.8	65.1	2.08	1.00
Semmes	1579.6	15.3	34.2	101.1	29.0	27.2	1.00	1.09
Dare	1578.2	14.8	35.3	96.8	31.7	34.8	1.00	1.05
Hutton	1559.7	16.8	35.6	101.7	29.7	31.0	1.05	1.05
Harosoy 63	1554.2	15.8	30.6	89.8	28.6	40.0	1.02	1.25
Jupiter	1551.5	16.6	43.2	116.1	47.5	61.7	2.10	1.02
Adelphia	1550.5	14.9	32.3	92.6	27.4	38.7	1.02	1.18
Lee 68	1534.5	15.9	32.3	99.6	30.8	28.9	1.05	1.11
Hill	1531.6	14.1	38.2	98.0	35.6	37.4	1.32	1.05
Bragg	1510.9	15.7	34.5	100.2	33.2	33.9	1.05	1.09
Bonus	1500.7	16.2	32.4	94.5	28.6	39.3	1.02	1.18
Grand mean	1649.3	15.6	34.8	98.3	32.1	39.4	1.16	1.07

\* Down plants: 1 = all erect, to 5 = all down, at maturity.

\*\* Seed loss from pods: 1 = none, to 5 = all down, at maturity.



Table 7 . Summary of agronomic data for varieties tested in environmental zone VII, first International Soybean Variety Evaluation Experiment (ISVEX).

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score*	Shattering Score**
Cutler 71	1842.5	19.4	32.4	95.0	26.0	46.8	1.13	1.00
Pickett 71	1640.5	13.3	36.6	102.9	25.0	43.4	1.00	1.00
Calland	1605.1	16.8	31.4	97.1	29.3	46.3	1.25	1.00
Jupiter	1582.8	12.8				72.9		
Hark	1575.0	13.3	31.9	92.9	18.1	37.5	1.67	1.08
Lee 68	1556.0	13.8	36.3	100.2	22.1	40.8	1.08	1.00
Williams	1538.3	15.3	32.6	97.2	20.9	42.0	1.08	1.00
Semmes	1533.7	12.5	37.8	107.1	21.0	44.6	1.00	1.00
Clark 63	1509.3	14.3	33.5	101.3	21.1	50.4	1.50	1.13
Hardee	1489.5	13.0	37.5	95.9	29.5	38.5	1.40	1.00
Bragg	1482.7	13.0	35.5	101.6	27.6	44.6	1.00	1.00
Improved Pelican	1358.4	10.2	39.9	111.4	43.3	71.6	1.50	1.00
Davis	1328.8	12.3	38.9	103.9	30.3	43.3	1.00	1.00
Hill	1309.5	11.9	40.3	98.3	33.4	49.0	1.55	1.00
Harosoy 63	1303.0	13.5	30.5	92.2	20.5	41.1	1.50	1.25
Adelphia	1232.7	11.8	35.9	96.8	19.5	54.2	1.63	1.13
Dare	1228.0	13.0	34.7	103.0	29.6	47.8	1.17	1.00
Hampton 266A	1200.5	13.7	34.5	94.9	24.3	44.2	1.08	1.00
Bonus	1134.6	14.2	29.9	93.1	21.6	41.7	1.25	1.00
Hutton	1112.0	13.8	36.3	101.9	22.4	37.8	1.00	1.00
Grand mean	1430.4	13.5	35.1	99.3	24.8	45.9	1.23	1.03

\* Down plants: 1 = all erect, to 5 = all down, at maturity.

\*\* Seed loss from pods: 1 = none, to 5 = more than 50 percent, at maturity.

Table 8. Frequency of high-yielding varieties in different environmental zones. Based on the five highest-yielding varieties at each site having a coefficient of variation <30.

Zone I (15 sites)		Zone IV (14 sites)		Zone VII (5 sites)	
Variety	Percentage	Variety	Percentage	Variety	Percentage
Hardee	75	Hardee	50	Pickett 71	60
Bragg	53	Davis	50	Williams	40
Williams	47	Improved		Clark 63	40
Hampton		Pelican	43	Bonus	40
266A	40	Calland	36	Harosoy 63	40
Davis	30	Clark 63	36	Semmes	40
Improved		Williams	29	Lee 68	40
Pelican	27	Jupiter	29		
Adelphia	27	Cutler 71	29		

Table 9. Mean days to flower of varieties within selected environmental zones.

Variety	Zone I	Zone IV	Zone VII
Jupiter	37.3	43.2	-
Hampton 266A	30.1	34.8	34.5
Hutton	30.5	35.6	36.3
Improved Pelican	35.1	41.6	39.9
Bragg	30.7	34.5	35.5
Semmes	29.9	34.2	37.8
Davis	32.1	38.0	38.9
Lee 68	29.0	32.3	36.3
Pickett 71	29.3	33.8	36.6
Dare	30.6	35.3	34.7
Hill	32.1	38.2	40.3
Bonus	27.6	32.4	29.9
Clark 63	28.5	32.1	33.5
Adelphia	27.9	32.3	35.9
Williams	29.1	32.5	32.6
Harosoy 63	27.3	30.6	30.5
Hark	26.1	29.1	31.9

(continued)



Table 9. Mean days to flower of varieties within selected environmental zones (cont.).

Variety	Zone I	Zone IV	Zone VII
Hardee	33.1	40.1	37.5
Calland	27.9	31.2	31.4
Cutler 71	26.7	34.1	32.4
Mean	30.2	34.8	35.1

Table 10. Mean days to maturity of varieties within selected environmental zones.

Variety	Zone I	Zone IV	Zone VII
Jupiter	102.9	116.1	-
Hampton 266A	89.7	99.7	94.5
Hutton	90.5	101.7	101.9
Improved Pelican	92.9	101.8	111.4
Bragg	89.7	100.2	101.6
Semmes	90.4	101.1	107.1
Davis	92.1	103.3	103.9
Lee 68	87.8	99.6	100.2
Pickett 71	89.9	99.9	102.9
Dare	88.1	96.8	103.0
Hill	86.1	98.0	98.3
Bonus	87.5	94.5	93.1
Clark 63	87.7	94.3	101.3
Adelphia	86.9	92.6	96.8
Williams	86.8	94.1	97.2
Harosoy 63	83.2	89.8	92.2
Hark	78.9	86.1	92.9
Hardee	93.4	104.4	95.9
Calland	88.9	94.3	97.1
Cutler 71	90.0	97.5	95.0
Mean	89.2	98.3	99.3

Table 11. Mean canopy height at flower and plant height at maturity for determinate and indeterminate varieties in zones I, IV, and VII.

Zone	Determinate Varieties		Indeterminate Varieties*	
	Canopy Height (cm)	Plant Height (cm)	Canopy Height (cm)	Plant Height (cm)
I	33.9	34.7	33.2	44.2
IV	33.6	36.1	30.2	44.9
VII	26.5	46.1	24.5	48.0

\*Varieties Hark, Harosoy 63, Adelpia, Calland, Williams, Bonus, Clark 63, Cutler 71, and Improved Pelican were the indeterminate varieties tested.

Table 12. Variety mean values for protein and oil content analyzed at the University of Illinois, first International Soybean Variety Evaluation Experiment (ISVEX).

Variety	All Zones (29 sites)		Zone I (15 sites)		Zone IV (7 sites)	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Jupiter	41.8	23.4	41.4	24.2	42.3	23.5
Hampton 266A	39.1	23.7	40.3	25.1	40.6	24.6
Hutton	43.1	22.8	43.2	23.4	42.8	23.4
Improved Pelican	42.8	23.2	42.6	24.0	42.3	23.8
Bragg	41.4	23.7	41.1	24.2	41.4	24.3
Semmes	44.1	24.6	41.5	25.0	40.1	25.3
Davis	41.4	23.2	41.5	23.6	40.7	23.5
Lee 68	42.1	23.5	42.3	23.8	41.6	24.4
Pickett 71	41.3	24.1	41.1	24.3	41.7	25.3
Dare	40.1	24.9	40.4	25.1	39.2	25.7
Hill	39.7	23.4	40.4	23.6	38.7	24.1
Bonus	42.6	24.0	41.9	24.8	42.6	24.2

(continued)



Table 12. Variety mean values for protein and oil content analyzed at the University of Illinois, first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

Variety	All Zones (29 sites)		Zone I (15 sites)		Zone IV (7 sites)	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Clark 63	40.8	24.3	40.4	24.7	40.5	24.9
Adelphia	40.0	24.1	39.8	24.6	40.1	24.2
Williams	42.0	23.4	41.8	24.4	41.9	24.6
Harosoy 63	40.6	23.9	39.7	24.5	41.0	24.3
Hark	40.5	24.6	39.6	24.9	40.0	26.8
Hardee	41.9	23.7	41.6	24.4	41.7	24.6
Calland	41.4	23.3	40.6	23.8	40.5	24.0
Cutler 71	40.6	24.6	40.5	25.0	40.1	25.2
Grand mean	41.4	23.8	41.1	24.4	41.0	24.5

Table 13. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Bahteem, Egypt, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Plant Height at Maturity (cm)
Williams	1248.2	12.0	47.0
Pickett 71	1133.6	8.3	66.5
Harosoy 63	1130.6	12.7	47.8
Clark	1120.2	11.7	40.5
Clark 63	1117.3	12.4	51.5
Adelphia	1042.3	10.4	47.8
Lee 68	1031.0	7.4	57.8
Dare	969.4	7.1	64.5
Semmes	913.5	7.4	59.8
Hampton 266A	823.1	9.7	70.8
Hill	773.9	7.3	66.3
Bonus	773.5	11.3	44.3
Hampton	690.1	10.1	66.0
Bragg	636.0	7.2	71.8
Rebel	627.6	8.5	63.5
Davis	609.7	7.8	62.3
Lee	558.4	7.8	69.3
Hutton	497.6	8.8	54.8
Jupiter	466.8	10.7	100.8
Improved Pelican	461.8	8.7	84.3
Grand Mean	831.2	9.4	61.8
Standard Error	112.9	0.5	4.7
Coefficient of Variation	27.2	10.5	15.1
LSD (.05)	319.4	1.4	13.2



Region - Africa	Country - Egypt
Site - Bahteem	Cooperator - M. Hakam
Latitude - 30° 02' N	Elevation - 21 m
Date planted - July 23, 1973	
Amount of moisture - 5 irrigations	
Fertilizer used (kg/ha) - N - 7.8	
Soil type - Clay	
Local varieties tested - Hampton	
Clark	
Lee	
Rebel	
Insects identified - Cotton leafworm - <u>Spodoptera littoralis</u> (Boisduval)	
- Common red mite - <u>Tetranychus</u> sp.	

Table 14. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Awassa, Ethiopia, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Davis	2415.9	17.7	60.3	141.5	67.5	55.5	2.0	1.3
Hill	2127.9	14.7	63.0	104.0	81.8	81.5	1.3	1.8
Williams	2123.3	20.8	52.3	102.8	72.5	52.8	2.3	1.3
Lee 68	1835.8	18.3	52.0	104.0	69.5	59.0	1.3	1.0
Harosoy 63	1834.5	19.0	48.0	104.0	65.8	50.5	2.0	2.0
Dare	1811.2	16.2	53.0	127.3	74.5	57.5	2.0	1.0
Hardee	1794.1	15.5	61.0	129.0	50.0	66.5	2.0	1.0
Clark 63	1759.1	16.8	52.3	104.8	66.3	54.0	1.8	2.0
Calland	1691.6	19.7	52.0	141.5	61.0	54.0	1.8	2.0
Semmes	1665.7	17.2	53.0	141.0	66.5	43.5	2.0	1.0
Hampton 266A	1647.0	22.1	53.0	118.8	80.0	71.0	1.0	1.0
Bonus	1641.5	16.3	53.0	127.3	76.5	57.5	2.0	1.0
Hutton	1620.0	22.1	51.0	142.0	64.3	50.0	1.8	1.0
Cutler 71	1456.1	19.4	47.0	82.0	68.8	56.5	1.0	1.0
Hark	1445.7	16.3	49.0	87.0	42.0	39.0	2.0	1.0
Improved Pelican	1338.2	12.6	64.0	159.0	82.8	98.8	2.0	1.0
Adelphia	1297.8	15.7	52.0	104.0	66.3	54.0	1.8	2.0
Bragg	1284.4	21.1	52.3	141.5	77.3	57.0	2.0	1.8
Bonus	972.7	16.3	52.0	139.0	59.0	52.5	1.0	1.0
Jupiter	401.7	13.4	59.5	148.8	71.5	88.8	2.0	1.5
Grand Mean	1608.3	17.5	53.7	122.4	68.7	59.4	1.8	1.4
Standard Error	117.0	0.4	1.0	7.2	2.8	3.7	0.2	0.1
Coefficient of Variation	14.6	5.1	3.9	11.7	8.2	12.5		
LSD (.05)	330.8	1.3	2.9	20.3	8.0	10.5	0.6	0.4



Region - Africa	Country - Ethiopia
Site - Awassa	Cooperator - Z. Oumer
Latitude - 7° N	Elevation - 1650 m
Date planted - June 21, 1973	Date harvested - September, 1973
Amount of moisture - 472 mm	
Fertilizer used (kg/ha) - N - 21 P - 23.5	
Soil type - Sandy silt loam pH = 6.5	
Diseases reported - Bacterial blight - <u>Pseudomonas glycinea</u>	
Insects identified - American bollworm - <u>Heliothis armigera</u> (Hübner)	

Table 15. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Legon, Ghana, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Davis	2459.7	18.8	34.0	102.0	43.3	30.0	1.5	1.0
Hampton 266A	1949.6	19.8	31.8	93.8	40.5	29.0	2.3	1.0
Dare	1898.7	17.8	32.0	88.5	38.8	32.3	3.3	1.3
Hardee	1877.0	18.5	35.0	99.0	31.0	29.3	2.3	1.3
Bragg	1632.8	17.0	43.5	95.3	44.8	33.0	3.8	1.5
Improved Pelican	1592.8	13.0	39.0	96.0	51.3	74.0	3.3	1.0
Lee 68	1554.9	18.0	29.5	87.8	35.5	26.5	2.0	1.3
Harosoy 63	1502.0	17.8	26.8	87.0	21.3	49.3	2.0	1.3
Adelphia	1488.2	18.0	27.8	87.0	23.8	40.0	2.0	1.3
Pickett 71	1364.4	16.8	31.0	95.3	42.5	27.8	2.5	1.8
Calland	1360.7	20.5	27.8	92.3	26.3	44.5	2.0	1.5
Cutler 71	1283.6	18.3	27.3	87.0	25.0	49.5	2.8	1.3
Hark	1215.7	15.0	27.0	80.0	24.0	37.0	3.8	1.5
Williams	1215.2	19.3	28.0	87.0	29.5	38.8	2.5	1.3
Clark 63	1214.4	17.5	28.0	87.0	29.8	41.0	2.5	1.3
Semmes	1161.9	16.5	31.3	95.3	37.0	24.5	2.5	1.3
Hutton	1065.2	22.8	32.0	101.3	33.0	27.5	2.3	1.3
Hill	886.0	16.0	34.3	91.5	42.0	28.0	2.8	1.8
Bonus	843.1	19.8	28.0	90.8	26.8	39.8	2.5	1.5
Jupiter	658.0	20.0	52.0	125.0	36.8	36.3	1.3	1.3
Grand Mean	1411.2	18.0	32.3	93.4	34.1	36.9	2.5	1.3
Standard Error	244.2	0.9	2.8	2.0	2.3	3.7	0.5	0.2
Coefficient of Variation	34.6	9.9	12.2	4.2	13.2	20.2	1.4	N.S.
LSD (.05)	690.7	2.5	5.6	5.6	6.4	10.5		



Region - Africa	Country - Ghana
Site - University of Ghana, Legon	Cooperator - R. Dadson
Latitude - 5° 39' N	Elevation - 60.29 m
Date planted - May 18, 1973	Date harvested - August, 1973
Amount of moisture - 626 mm	
Fertilizer used (kg/ha) - N - 37.7	P - 16.4      K - 31.4

Table 16. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Legon, Ghana, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity	Lodging Score	Shattering Score
Hardee	1454.4	17.1	32.3	100.0	17.8	21.5	1.5	1.5
Davis	1370.3	17.7	32.0	101.3	20.0	21.5	1.0	1.8
Jupiter	1261.6	19.7	37.0	103.0	26.0	45.5	2.0	1.3
Improved Pelican	1257.1	15.4	37.8	102.0	22.3	35.5	1.8	1.0
Calland	1070.3	18.7	27.5	90.3	19.5	31.8	1.3	1.3
Hampton 266A	1051.8	17.8	28.8	104.8	20.8	18.8	1.8	1.5
Hutton	987.1	19.4	27.8	104.5	21.3	20.5	1.3	2.0
Cutler 71	950.8	17.4	27.3	92.5	25.5	31.5	1.5	1.5
Bragg	902.7	16.9	30.8	105.0	21.0	25.0	1.3	1.5
Williams	843.4	17.9	37.8	96.5	21.0	32.3	1.8	1.3
Clark 63	818.7	16.5	27.5	94.0	20.0	31.8	1.3	1.5
Adelphia	618.5	16.1	27.0	84.5	18.3	26.0	2.3	1.8
Pickett 71	745.8	15.7	27.0	109.5	17.3	20.0	1.5	2.0
Dare	745.5	14.4	29.8	91.3	20.3	23.8	1.5	1.0
Semmes	727.8	14.9	27.8	97.3	15.8	18.5	2.0	1.8
Lee 68	672.7	14.5	27.0	94.0	16.0	17.5	1.8	1.8
Hill	654.4	13.1	33.0	89.3	26.5	29.3	1.5	1.3
Hark	440.7	17.1	27.0	78.0	19.5	27.5	2.8	1.3
Bonus	436.3	17.9	27.3	92.5	19.3	27.8	1.8	1.5
Harosoy 63	427.8	16.7	27.3	95.0	20.8	29.8	1.8	1.3
Grand Mean	871.8	16.5	30.1	96.3	20.4	26.8	1.7	1.5
Standard Error	164.7	0.6	2.2	3.6	1.5	1.8	0.5	0.3
Coefficient of Variation	37.8	7.5	14.3	7.4	14.3	13.7	N.S.	N.S.
LSD (.05)	465.9	1.8	6.1	10.1	4.1	5.2	N.S.	N.S.

Region - Africa	Country - Ghana
Site - Legon	Cooperator - R. Dadson
Latitude - 5° 39' N	Elevation - 60.3 m
Date planted - October 2, 1973	Date harvested - January, 1974
Amount of moisture - 493 mm	
Fertilizer used (kg/ha) - N - 13.6	P - 13.6 K - 13.6



Table 17. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Ralinku, Lesotho, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Bragg	673.4	11.5	67.5	134.8	54.0	66.5
Calland	637.2	13.7	47.5	123.0	37.5	43.0
Pickett 71	622.7	10.0	63.3	131.3	48.0	51.0
Hill	619.9	9.2	67.5	136.5	48.8	63.8
Harosoy 63	605.3	13.8	45.0	107.0	41.0	41.0
Williams	594.7	12.4	48.5	121.5	42.3	40.0
Semmes	592.6	9.7	70.0	136.5	40.8	54.0
Hutton	568.4	11.1	69.5	136.5	44.8	62.3
Adelphia	560.1	11.8	47.8	123.0	40.5	41.0
Hark	555.2	12.2	48.5	107.0	41.3	41.3
Dare	538.1	10.4	59.5	134.8	47.0	55.8
Clark 63	531.2	11.9	48.5	121.5	42.3	42.8
Cutler 71	490.3	12.6	48.5	121.5	40.8	42.8
Bonus	489.3	13.4	47.5	123.0	35.5	40.3
Lee 68	475.5	9.9	63.5	131.3	43.5	47.5
Hampton 266A	447.5	9.6	73.0	149.5	42.3	59.0
Davis	406.7	8.8	80.8	149.5	47.0	58.5
Grand Mean	553.4	11.3	58.6	128.7	43.4	50.0
Standard Error	61.6	0.3	1.7	1.3	2.6	2.7
Coefficient of Variation	22.3	5.5	5.8	2.0	12.1	10.9
LSD (.05)	174.3	N.S.	4.8	3.7	7.4	7.7

Region - Africa	Country - Lesotho
Site - Ralinku, Quthing District	Cooperator - A. M. Acland and W. M. Barker
Latitude - 30° 17' S	Elevation - 1425 m
Date planted - December 21-24, 1973	Date harvested - April, 1974
Amount of moisture - 418.7 mm	
Fertilizer used (kg/ha) - N - 7.73    P - 8.65	
Insects identified - American bollworm - <u>Heliothis armigera</u> (Hübner)	

Table 18. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Njala, Sierra Leone, 1973.

Variety	Yield (kg/ha)	Days to Flower	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Cutler 71	991.9	25.3	33.3	2.0	1.8
Williams	868.9	25.3	31.8	1.8	1.3
Lee 68	843.9	26.0	20.8	1.8	1.5
Harosoy 63	825.2	24.8	30.8	2.0	2.0
Semmes	814.7	28.3	19.3	1.8	2.0
Improved Pelican	812.7	31.0	50.3	1.3	1.0
Pickett 71	764.7	27.3	23.3	1.8	1.8
Davis	689.7	29.0	20.8	1.5	1.8
Bragg	677.2	27.5	26.0	1.8	1.5
Hampton 266A	535.5	28.0	21.8	1.8	1.8
Dare	510.5	28.3	17.0	1.5	1.3
Adelphia	506.4	25.0	23.0	2.0	1.8
Clark 63	420.9	19.3	22.8	1.5	1.3
Calland	302.1	19.0	15.0	0.8	0.8
Hark	295.9	17.3	20.5	1.0	1.5
Hardee	87.5	22.0	4.0	0.5	0.5
Grand Mean	621.7	24.5	23.8	1.5	1.5
Standard Error	151.9	3.3	3.9	0.3	0.3
Coefficient of Variation	48.9	27.1	33.1		
LSD (.05)	429.5	9.4	11.1	0.8	0.9



Region - Africa	Country - Sierra Leone
Site - Njala University College	Cooperator - S. Funnah
Latitude - 8° N	Elevation - 150 m
Date planted - September 15, 1973	Date harvested - December, 1973
Amount of moisture - 920 mm	
Fertilizer used (kg/ha) - K - 92	
Soil type - Silt	
Diseases reported - <u>Sclerotium rolfsii</u>	

Table 19. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Afgoi, Somalia, 1974.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Bonus	1171.1	12.5	35.8	83.0	32.8	26.3	1.3
Hill	975.2	13.5	35.0	80.5	28.5	21.3	1.0
Hampton 266A	958.5	12.9	35.0	82.3	26.3	18.8	1.0
Adelphia	954.4	13.3	34.5	80.8	27.0	22.5	1.0
Hardee	954.4	13.3	34.3	79.5	25.8	24.0	1.3
Davis	948.1	12.1	35.0	80.3	29.0	25.3	1.3
Improved Pelican	929.4	11.9	36.0	87.0	41.0	31.3	1.0
Cutler 71	923.1	12.9	35.5	86.0	31.8	29.8	1.0
Dare	862.7	12.0	34.8	81.3	30.3	20.0	1.3
Hutton	846.0	11.9	35.0	80.8	28.3	22.8	1.3
Semmes	816.8	12.6	36.3	82.3	22.3	23.5	1.0
Jupiter	808.5	11.1	35.3	83.0	28.5	24.0	1.0
Calland	793.9	12.0	35.5	81.8	29.3	22.0	1.3
Williams	779.3	11.8	34.3	78.0	28.0	25.3	1.0
Clark 63	773.1	11.5	35.3	83.5	28.3	24.5	1.5
Harosoy 63	760.6	12.6	34.0	80.8	25.8	18.0	1.0
Pickett 71	748.1	12.3	36.5	78.3	33.3	25.5	1.0
Hark	739.7	12.3	34.5	80.3	27.5	20.3	1.0
Lee 68	725.1	11.9	35.5	81.5	26.3	20.0	1.5
Bragg	691.8	11.9	36.8	85.0	32.5	29.8	1.0
Grand Mean	858.0	12.3	35.2	81.8	29.1	23.7	1.1
Standard Error	139.5	0.7	0.9	3.0	2.9	3.0	0.2
Coefficient of Variation	32.5	11.0	5.1	7.4	19.6	25.0	33.4
LSD (.05)	N.S.	N.S.	N.S.	N.S.	8.1	N.S.	N.S.

Country - Somalia  
Cooperator - M. A. Dukseyeh  
Elevation - 13 m

Region - Africa  
Site - Afgoi  
Latitude - 2° 9' N



Table 20. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Ilonga, Tanzania, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity	Lodging Score	Shattering Score
Dare	1733.7	20.6	33.3	74.5	24.8	30.0	1.0	1.0
Bonus	1583.7	20.4	29.8	66.5	29.0	48.0	2.3	1.5
Clark 63	1542.0	18.8	28.0	79.0	27.3	49.8	1.8	1.0
Williams	1467.0	21.3	29.8	79.0	27.0	44.5	1.5	1.0
Adelphia	1450.3	21.4	29.8	72.0	25.8	43.0	1.5	1.3
XB/2	1391.9	23.0	35.0	85.5	27.0	52.8	1.0	1.0
Bragg	1316.9	20.0	29.8	79.0	26.3	33.0	1.0	1.0
Hampton 266A	1308.6	18.6	29.8	78.0	28.8	30.5	1.0	1.0
Jupiter	1166.9	27.7	33.3	100.0	25.0	54.3	1.0	1.0
Hutton	1100.2	23.3	33.3	86.5	18.3	32.5	1.0	1.0
Improved Pelican	1050.2	18.6	35.0	89.5	18.8	43.8	1.0	1.0
Pickett 71	975.2	17.9	40.3	80.0	19.0	24.5	1.0	1.0
7H/101	958.5	16.8	57.0	113.0	72.5	89.0	2.5	1.0
Davis	941.9	20.1	35.0	81.0	21.5	28.0	1.0	1.0
Lee 68	841.8	18.6	38.8	79.0	16.5	25.8	1.0	1.0
Semmes	700.1	17.9	33.3	78.0	17.3	23.5	1.0	1.0
Harosoy 63	675.1	18.9	31.5	75.5	17.3	37.5	1.3	1.5
3H/1	666.8	18.0	51.5	116.0	57.0	84.8	1.0	1.0
Hill	575.1	18.6	33.3	80.0	19.3	25.5	1.0	1.0
1H/143	550.1	17.0	56.0	124.0	79.0	94.8	1.0	1.0
Grand Mean	1099.8	20.1	36.2	85.8	29.8	44.8	1.2	1.1
Standard Error	194.6	0.7	3.4	2.6	3.0	3.3	0.2	0.2
Coefficient of Variation	35.4	6.9	18.5	6.0	19.8	14.8	N.S.	N.S.
LSD (.05)	550.5	2.0	9.5	7.2	8.4	9.4	N.S.	N.S.

Region - Africa

Site - Ilonga

Latitude - 6° 46' S

Date planted - March 26, 1974

Amount of moisture - 566 mm

Soil type - Sandy Clay      pH = 6.5

Local varieties tested - XB/2

7H/101

3H/1

1H/143

Country - Tanzania

Cooperator - T. B. Rai

Elevation - 503 m

Date harvested - June, 1974

Table 21. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Njombe, Tanzania, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity	Lodging Score	Shattering Score
Davis	1329.4	22.5	158.0	37.8	42.5	1.0	1.0
Williams	1155.2	20.5	135.0	31.3	30.0	2.0	2.0
Lee 68	1125.2	18.5	133.8	40.8	33.8	1.0	1.3
Hill	1067.7	17.8	139.0	39.0	48.8	1.3	1.0
Pickett 71	1011.9	18.0	135.0	45.0	46.3	1.0	1.3
Adelphia	964.8	16.8	133.8	29.3	27.5	1.8	1.5
Clark 63	873.9	15.8	130.0	32.5	31.3	1.5	1.0
Hutton	823.1	27.8	139.0	41.3	41.3	1.5	1.0
Calland	806.8	17.8	139.5	25.5	28.8	2.3	1.5
Semmes	805.6	18.3	139.0	43.0	41.3	1.0	1.0
Dare	797.7	18.0	139.0	40.0	45.0	1.3	1.0
Cutler 71	721.8	18.0	131.3	30.3	28.8	2.3	1.3
Harosoy 63	708.5	18.5	132.5	29.3	26.3	1.8	1.5
Hampton 266A	678.5	21.8	158.0	43.0	47.5	1.0	1.0
Hark	653.5	15.5	130.0	23.0	20.0	1.5	1.3
Bragg	636.8	22.5	139.0	44.0	52.5	1.5	1.0
Hardee	390.5	16.8	185.0	34.5	52.5	1.5	1.0
Bonus	389.2	15.3	135.0	32.5	32.5	1.8	2.0
Jupiter	41.3	15.3	195.0	39.8	85.0	1.3	1.0
Improved Pelican	40.4	16.3	185.0	42.3	81.5	2.8	1.3
Grand Mean	751.1	18.6	145.6	36.2	42.1	1.5	1.2
Standard Error	98.8	1.2	1.5	2.1	3.2	0.2	0.2
Coefficient of Variation	26.3	13.4	2.0	11.4	15.0	N.S.	N.S.
LSD (.05)	279.4	3.5	4.2	5.9	8.9	N.S.	N.S.



Region - Africa	Country - Tanzania
Site - Njombe	Cooperator - K. D. Edwards
Latitude - 9° 40' S	Elevation - 1800 m
Date planted - December 27, 1973	Date harvested - May, 1974
Amount of moisture - 945 mm	
Fertilizer used (kg/ha) - N - 36	P - 83
Soil type - Clay silt	pH = 6.0

Table 22. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Kabul, Afghanistan, 1973.

Variety	Yield (kg/ha)	100 - Seed Weight (g)	Days to Flower	Days to Maturity	Plant Height at Maturity
Cutler 71	2951.8	16.0	75.0	113.3	87.5
Williams	2418.0	15.4	72.0	109.3	88.8
Adelphia	2257.1	13.4	77.3	121.0	85.8
Hark	2205.0	13.5	73.3	107.5	85.8
Bonus	2153.3	15.2	55.5	113.3	86.5
Calland	2084.2	12.0	59.8	89.5	68.0
Harcsoy 63	1822.9	15.0	72.0	110.8	86.3
Clark 63	1650.0	13.3	74.0	105.5	91.0
Grand Mean	2192.8	14.2	69.8	108.8	84.9
Standard Error	313.6	1.4	9.1	10.5	8.0
Coefficient of Variation	28.6	19.9	26.0	19.4	18.9
LSD (.05)	887.0	4.0	25.7	19.4	22.7

Region - Asia

Site - Darul Aman Research Station, Kabul

Latitude - 34° 33' N

Date planted - May 23, 1973

Amount of moisture - 12 irrigations

Fertilizer used (kg/ha) - N - 60 P - 48.0

Country - Afghanistan

Cooperator - S. A. Rahman Mohmand

Elevation - 1803 m

Date harvested - September, 1973



Table 23. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Jabalpur, India, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Plant Height at Maturity (cm)
Pickett 71	1862.9	17.5	35.3	99.3	27.3
JS-2	1812.9	18.1	36.8	92.8	30.5
Semmes	1767.0	16.1	37.0	102.5	27.0
Punjab-1(S)	1748.3	18.8	38.0	90.5	32.8
Hardee	1743.3	14.3	41.8	103.5	28.0
Improved Pelican	1736.2	11.5	39.0	104.3	56.3
Hampton 266A	1642.0	16.3	38.8	102.0	32.3
Lee 68	1579.5	17.6	36.5	98.5	29.0
Bragg	1562.8	17.3	37.0	102.0	27.3
Davis	1250.3	17.0	39.0	102.5	28.3
Hill	1187.7	15.5	37.3	95.8	30.8
Williams	1172.7	19.6	31.0	93.0	27.3
Dare	991.9	15.7	35.5	124.3	24.0
Cutler 71	828.1	17.2	29.0	91.3	26.3
Calland	787.2	15.6	28.0	90.3	32.0
Hark	783.5	13.4	26.0	84.5	26.0
Harosoy 63	589.7	11.5	27.3	82.3	27.5
Bonus	397.2	15.9	29.0	89.5	23.8
Hutton	284.2	18.3	35.5	101.8	19.8
Grand Mean	1248.8	16.2	34.6	97.4	29.3
Standard Error	126.2	0.5	1.3	5.2	2.1
Coefficient of Variation	20.2	6.2	7.3	10.7	14.1
LSD (.05)	357.0	1.4	3.6	14.7	5.8

Region - Asia

Country - India

Site - Agricultural University, Jabalpur

Cooperator - M. Lal

Latitude - 23° N

Elevation - 393 m

Date planted - July 19, 1973

Date harvested - October 1973

Amount of moisture - 1197 mm

Fertilizer used (kg/ha) - N - 20    P - 8.7    K - 25.0

Soil pH = 7.3

Local varieties tested - Punjab-1 (S)

JS-2

Table 24. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Pantnagar, India, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Plant Height at Maturity
UPSS-38	2560.9	14.8	47.0	126.0	55.6
Semmes	2406.7	13.0	43.5	112.3	37.8
Pickett 71	2263.0	13.2	42.8	110.0	39.0
Hampton 266A	2246.3	12.6	43.5	112.0	35.5
Williams	2222.1	15.2	30.0	97.0	48.5
Hardee	2202.5	13.5	58.0	121.0	38.7
Bragg	2013.3	13.3	40.0	115.5	40.8
Improved Pelican	1821.2	10.5	50.0	120.8	74.2
Cutler 71	1729.5	17.3	31.0	97.0	47.7
Dare	1660.7	15.2	37.0	110.0	36.3
Davis	1210.7	13.5	44.0	112.5	29.7
Grand Mean	2030.6	13.8	42.4	112.2	44.0
Standard Error	238.8	0.5	0.1	1.1	3.6
Coefficient of Variation	23.5	7.0	0.7	2.0	4.3
LSD (.05)	673.6	N.S.	N.S.	3.2	2.7

Region - Asia	Country - India
Site - Pantnagar	Cooperator - B. B. Singh
Latitude - 29.5° N	Elevation - 761 m
Date planted - July 10, 1973	Date harvested - October, 1973
Fertilizer used (kg/ha) - N - 20    P - 80    K - 60	
Soil type - Loam	
Local variety tested - UPSS-38	
Diseases reported - Yellow mosaic - Bean Yellow Mosaic Virus	
	Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>
	Soybean rust - <u>Phakopsora pachyrhizi</u>



Table 25. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Bogor, Indonesia, 1974.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Harosoy 63	906.0	10.7	32.0	80.0	37.7	41.3
Dare	881.8	9.5	30.7	82.0	30.7	36.3
Improved Pelican	841.8	10.7	31.3	79.0	29.7	33.3
Davros	841.3	10.1	31.3	82.0	35.7	48.7
Hill	830.2	11.5	29.0	78.0	37.0	41.7
Semmes	789.0	10.2	30.3	84.0	39.0	54.0
Jupiter	787.9	9.6	31.0	83.3	38.3	56.0
Clark 63	769.0	9.1	30.3	83.3	33.7	42.7
Bragg	765.2	10.0	29.3	79.0	33.3	34.7
Williams	764.1	10.4	30.7	84.0	39.3	42.7
Hampton 266A	726.3	9.7	29.3	78.0	30.7	32.7
Americana	602.9	10.5	30.3	76.7	33.3	35.3
1343	591.2	10.1	29.0	83.0	40.3	49.0
Hardee	585.7	9.9	29.3	79.3	30.0	33.7
Hutton	585.7	10.2	29.3	80.3	27.7	30.7
Bonus	581.8	10.2	30.0	78.3	26.7	26.3
Adelphia	568.4	9.2	30.3	78.3	27.0	26.7
Lee 68	467.3	9.3	31.3	84.3	38.7	48.3
Davis	458.4	10.3	31.3	87.0	35.3	46.3
Pickett 71	376.2	9.7	30.0	76.7	27.3	26.7
Grand Mean	686.1	10.0	30.3	80.8	33.6	39.4
Standard Error	145.3	0.8	1.2	2.9	4.1	7.9
Coefficient of Variation	36.7	13.9	6.7	6.3	21.2	34.6
LSD (.05)	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

Region - Asia	Country - Indonesia
Site - Bogor	Cooperator - R. Freed
Latitude - 6° S	Elevation - 260 m
Date planted - March 27, 1974	Date harvested - July, 1974
Amount of moisture - 1354 mm	
Fertilizer used (kg/ha) - N - 20    P - 40    K - 50	
Soil type - Latisol	
Local varieties tested - 1343	
Davros	
Americana	
Diseases reported - Rust - <u>Phakopsora pachyrhizi</u>	
Bacterial pustule - <u>Pseudomonas glycinea</u>	

Table 26. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Citayam, Indonesia, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Clark 63	2174.6	17.0	29.0	85.0	64.0	57.0	2.0
Harosoy 63	2156.7	15.9	29.3	81.3	62.0	54.5	1.0
Williams	2010.8	17.1	29.3	84.3	67.5	58.3	1.0
Bonus	1975.0	15.8	29.3	81.5	55.0	53.5	1.0
Adelphia	1902.5	14.5	28.3	81.5	61.3	54.8	1.0
Hill	1895.0	17.3	32.0	83.5	58.5	43.5	1.0
Hardee	1877.9	6.8	32.3	89.5	53.3	34.5	1.0
Semmes	1872.9	16.5	29.3	88.0	52.3	30.3	1.0
Dare	1844.5	17.0	32.3	82.5	54.3	38.8	1.0
Lee 68	1742.0	17.0	27.3	83.5	54.3	29.3	1.0
Pickett 71	1712.4	16.6	29.0	86.8	46.3	31.3	1.0
Davis	1684.1	14.5	30.8	82.8	60.5	39.0	1.0
Bragg	1643.2	15.8	31.5	83.0	63.0	34.5	1.0
Hutton	1572.0	16.9	31.8	85.3	57.5	32.0	1.0
Hampton 266A	1497.8	17.5	31.8	80.0	48.3	40.5	1.0
Ringgit	1496.1	9.1	36.8	83.5	89.8	78.5	4.5
Improved Pelican	1367.4	11.5	33.3	89.3	85.3	85.5	3.8
Sumbing	1211.9	8.3	32.5	83.0	94.0	66.8	1.0
No. 29	1089.8	6.8	39.0	99.0	93.5	88.3	2.3
Jupiter	723.5	12.3	35.0	98.5	90.3	65.0	2.0
Grand Mean	1672.5	14.6	31.5	85.6	65.5	50.8	1.5
Standard Error	97.5	0.4	0.4	1.3	2.4	1.7	0.3
Coefficient of Variation	11.7	5.6	2.4	3.2	7.3	6.7	
LSD (.05)	275.7	1.2	1.1	3.8	6.7	4.8	0.7

Region - Asia	Country - Indonesia
Site - Citayam	Cooperator - R. Freed and Sumarno
Latitude - 6° S	Elevation - 75 m
Date planted - July 17, 1973	Date harvested - October, 1973
Fertilizer used (kg/ha) - N - 20	P - 31.4
	K - 41.7
Soil type - Red-brown latosol - Clay	
Local varieties tested - Sumbing	
Ringgit	
No. 29	
Diseases reported - Soybean rust - <u>Phakopsora pachyrhizi</u>	
	Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>



Table 27. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Jogjakarta, Indonesia, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
No. 1338	1807.9	11.5	36.5	83.5	27.5	30.8	1.0
TK-5	1577.4	16.7	39.8	90.0	33.3	43.0	1.0
Williams	1308.6	15.7	34.5	83.5	30.3	35.0	1.0
Harosoy 63	1050.6	14.4	34.5	83.5	27.5	30.8	1.0
Improved Pelican	1027.3	11.6	40.0	92.0	33.5	63.3	1.5
Adelphia	1019.0	12.7	34.5	86.0	25.0	28.0	1.0
Clark 63	1016.9	13.6	34.3	85.3	24.5	27.5	1.0
Lee 68	981.4	14.7	34.3	83.5	27.8	21.8	1.0
Pickett 71	941.9	13.1	34.3	83.8	27.5	22.3	1.0
Semmes	938.5	13.3	34.3	83.5	26.8	21.5	1.0
No. 1248	912.7	11.2	39.8	93.0	30.0	42.8	1.0
Hill	900.2	11.3	38.0	84.8	28.3	34.0	1.0
Davis	891.4	11.1	34.5	86.0	28.8	28.8	1.0
Bonus	868.9	13.2	34.3	83.3	25.5	32.5	1.0
Bragg	868.1	13.2	34.0	85.0	30.3	28.3	1.0
Hampton 266A	754.3	13.9	34.3	80.8	29.8	23.8	1.0
Dare	735.6	12.4	34.0	79.5	26.5	24.8	1.0
No. 29	679.3	6.2	49.3	97.0	60.0	80.5	5.0
Hutton	543.9	13.9	34.0	83.8	24.8	19.3	1.0
Jupiter	70.8	11.6	46.0	97.0	32.5	42.0	1.0
Grand Mean	944.7	12.7	36.7	86.6	30.0	35.0	1.2
Standard Error	65.5	0.5	0.3	0.8	1.6	1.9	0.1
Coefficient of Variation	13.9	7.3	1.6	1.8	10.4	11.0	
LSD (.05)	185.1	1.3	0.8	2.2	4.4	5.5	0.5

Region - Asia	Country - Indonesia
Site - Central Java, Jogjakarta	Cooperator - Soenjoto D.
Latitude - 7° S	Elevation - 440 m
Date planted - July 18, 1973	Date harvested - October, 1973
Amount of moisture - 538 mm	
Fertilizer used (kg/ha) - N - 10.5	P - 13.1 K - 25.0
Soil type - Clay	pH = 5.5
Local varieties tested - No. 29	
TK-5	
No. 1248	
No. 1338	
Diseases reported - Soybean mosaic - Soybean Mosaic Virus	

Table 28. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Serdany, Malaysia, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Williams	968.5	16.8	27.5	78.0	43.5	52.0	1.0
Hark	959.4	16.3	27.0	71.0	30.3	38.3	1.0
Calland	919.4	16.8	27.8	80.5	42.8	48.8	1.0
Hardee	819.0	14.3	32.3	83.0	28.5	28.5	1.0
Pickett 71	755.2	13.5	28.5	73.8	22.0	24.0	1.0
Semmes	718.3	12.4	29.3	74.8	21.8	21.5	1.0
Clark 63	691.4	13.5	29.5	75.5	37.5	43.0	1.0
Harosoy 63	659.3	15.3	27.8	71.5	30.5	36.8	1.0
Lee 68	634.7	13.1	28.5	73.0	22.0	24.8	1.0
Davis	618.5	12.8	31.8	73.8	26.5	27.0	1.0
Improved Pelican	616.8	12.3	35.3	81.5	33.5	52.0	1.0
Dare	601.8	13.4	29.8	71.0	23.8	24.0	1.0
Bonus	598.5	14.8	27.0	71.5	33.3	38.0	1.0
Bragg	587.6	12.5	29.5	74.3	27.5	31.5	1.0
Adelphia	564.3	11.9	27.5	74.0	31.3	36.5	1.0
Hill	539.8	13.4	31.8	76.8	23.5	26.5	1.0
Hutton	507.2	13.7	29.3	74.3	24.5	26.0	1.0
Hampton 266A	441.3	13.6	29.3	71.0	24.8	26.5	1.0
S2	373.8	11.1	43.0	85.0	41.0	69.0	3.0
Jupiter	366.7	12.8	31.3	83.3	42.5	53.3	1.3
Grand Mean	647.1	13.7	30.2	75.9	31.0	36.4	1.1
Standard Error	117.1	0.8	0.8	0.9	2.8	3.1	0.1
Coefficient of Variation	36.2	12.3	5.8	2.5	18.4	16.8	
LSD (.05)	331.3	2.4	2.5	2.7	8.0	8.7	0.3

Region - Asia	Country - Malaysia
Site - Serdang	Cooperator - Ajit Singh Sidhu
Latitude - 3° N	Elevation - 30 m
Date planted - October 11, 1973	Date harvested - January, 1974
Amount of moisture - 574 mm	
Fertilizer used (kg/ha) - P - 25.0	K - 57
Soil type - Clay	pH = 5.0
Local varieties tested - S <sub>2</sub>	
Diseases reported - Soybean rust - <u>Phakopsora</u>	<u>pachyrhizi</u>



Table 29. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Mansehra, Pakistan, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)
Jupiter	4911.0	17.2
Williams	3236.8	19.0
Bragg	3201.2	18.3
Davis	3104.5	18.4
Semmes	2972.3	15.3
Adelphia	2939.5	20.0
Calland	2907.2	18.0
Hark	2827.2	18.1
Clark 63	2816.7	18.4
Hill	2722.2	16.6
Hampton 266A	2464.4	17.2
Dare	2408.3	17.2
Pickett 71	2332.1	17.7
Bonus	2024.8	20.3
Lee 68	1967.6	18.2
Hutton	1834.3	17.1
Grand Mean	2791.9	17.9
Standard Error	567.7	1.1
Coefficient of Variation	35.2	10.4
LSD (.05)	N.S.	2.6

Region - Asia	Country - Pakistan
Site - N.W.F.P., Mansehra	Cooperator - S. Badshah
Latitude - 34° N	Elevation - 1080 m
Date planted - May 24, 1973	Date harvested - October, 1973
Fertilizer used (kg/ha) - N - 22.4    P - 25.2	
Soil type - Sandy loam	
Diseases reported - Yellow mosaic - Bean Yellow Mosaic Virus	

Table 30. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Swat, Pakistan, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Maturity	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Lee 68	4826.4	15.4	149.0	93.0	1.0	1.0
Davis	4122.9	14.3	149.3	85.3	2.0	1.0
Dare	3782.8	15.3	140.8	88.8	1.0	1.0
Pickett 71	3782.4	14.9	150.5	88.0	1.0	1.0
Bragg	3593.2	14.4	149.8	95.3	2.0	1.0
Cutler 71	3404.4	20.2	117.3	94.8	1.0	2.0
Semmes	3404.0	14.0	150.5	83.0	2.0	1.0
Hill	3215.2	15.8	139.3	87.5	1.0	1.0
Improved Pelican	3214.8	11.3	169.5	136.8	5.0	1.0
Williams	3026.0	18.8	139.5	90.5	1.0	1.0
Hutton	2840.2	16.7	169.0	87.3	1.0	1.0
Hardee	2742.2	15.2	169.8	123.5	3.0	1.0
Calland	2269.2	16.4	110.3	99.0	1.0	1.0
Clark 63	2269.2	15.3	139.8	89.3	1.0	1.0
Hampton 266A	1713.7	16.7	169.3	87.3	1.0	1.0
Harosoy 63	1701.6	17.5	139.3	88.5	1.0	1.0
Hark	1070.2	15.8	139.8	79.8	1.0	2.0
Adelphia	661.0	18.5	139.0	90.5	1.0	1.0
Bonus	566.8	16.6	140.5	79.0	1.0	1.0
Grand Mean	2747.7	15.9	145.9	93.5	1.5	1.1
Standard Error	120.3	0.3	1.6	2.7		
Coefficient of Variation	8.8	4.2	2.2	5.9		
LSD (.05)	340.2	1.0	4.5	7.8		

Region - Asia	Country - Pakistan
Site - Swat	Cooperator - S. Badshah
Latitude - 34° N	Elevation - 1200 m
Date planted - May 16, 1973	Date harvested - October, 1973
Fertilizer used (kg/ha) - N - 29	P - 22.2
Soil type - Sandy loam	pH = 7
Diseases reported - Yellow mosaic	- Bean Yellow Mosaic Virus
Insects identified - <u>Diacrisia</u> sp.	
	<u>Nezara</u> sp.
	<u>Empoasca</u> sp.



Table 31. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at La Granja, Philippines, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Williams	2953.1	21.3	24.0	91.0	84.3	83.3	1.0
Bonus	2686.0	19.5	28.0	87.0	81.5	80.3	1.8
Hardee	2574.7	17.5	35.0	108.0	63.5	58.3	1.0
Bragg	2551.8	18.5	32.0	101.0	59.0	65.0	1.0
Pickett 71	2407.1	18.0	28.0	101.0	42.8	38.3	1.0
Davis	2318.8	17.3	32.0	102.3	47.3	45.0	1.0
Hampton 266A	2288.4	21.0	32.0	101.0	52.8	50.5	2.0
Harosoy 63	2287.1	18.0	24.0	87.0	88.0	88.0	2.0
Clark 63	2277.1	19.5	24.0	91.0	82.8	88.3	2.0
Hill	2188.8	19.0	32.0	91.0	44.8	43.3	1.0
Semmes	2159.6	17.8	27.8	101.0	44.3	37.3	1.0
Hutton	2155.8	22.3	32.0	101.0	41.8	33.8	1.0
Adelphia	2138.8	18.0	24.0	91.0	81.3	74.3	2.0
Lee 68	2067.9	20.3	28.0	101.0	34.8	31.5	1.0
Hark	2047.9	15.8	24.0	75.0	77.5	72.3	1.0
Dare	2037.1	19.3	32.0	101.0	40.8	37.0	1.0
TK-5	1573.2	17.0	35.0	87.0	76.8	71.0	2.0
Improved Pelican	1239.8	14.5	38.0	101.0	59.0	65.0	1.0
L-114	618.9		54.0	132.0	64.5	90.3	3.0
Grand Mean	2135.4	18.7	30.8	98.1	63.1	64.2	1.5
Standard Error	138.0	0.4	0.1	0.3	3.9	4.0	0.1
Coefficient of Variation	12.9	4.6	0.4	0.6	12.5	12.4	
LSD (.05)	390.2	1.2	0.2	0.8	11.1	11.2	0.2

Region - Asia	Country - Philippines
Site - UPCA, La Granja Research and Training Station, La Carlota City	Cooperator - R. Lantican
Latitude - 10° 24' N	Elevation - 74 m
Date planted - May 18, 1973	Date harvested - August, 1973
Amount of moisture - 687 mm	
Fertilizer used (kg/ha) - N - 45      P - 19.6      K - 37.5	
Soil type - Clay loam	
Local varieties tested - TK-5	
L-114	
Diseases reported - Bacterial pustule	- <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>
Insects identified - Corn earworm	- <u>Heliothis armigera</u> (Hübner)

Table 32. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Los Banos, Philippines, 1973.

Variety	Yield (kg/ha)	100 - Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Cutler 71	3855.8	21.4	26.0	96.0	18.8	72.0	2.0	1.3
Clark 63	3512.0	19.8	25.5	102.0	19.8	75.3	1.3	1.0
Davis	3404.8	15.5	35.5	103.5	33.0	40.8	1.0	1.0
Adelphia	3363.5	19.0	26.0	96.0	15.0	61.0	1.0	1.0
Dare	3304.8	16.0	31.0	97.0	24.3	42.3	1.0	1.5
Pickett 71	3304.0	14.7	31.0	108.0	25.8	38.3	1.0	1.0
Williams	3186.9	19.8	26.8	98.0	17.8	72.8	1.0	1.0
Hardee	3131.9	14.9	35.3	111.0	38.3	43.0	1.0	1.0
Semmes	3104.0	14.1	31.8	104.0	25.0	32.5	1.0	1.0
Hutton	3071.0	16.6	31.0	105.0	23.0	38.8	1.0	1.0
Lee 68	3058.9	16.3	29.0	104.0	24.3	32.8	1.0	1.0
Hill	2964.8	15.5	33.3	98.3	29.8	46.5	1.0	1.0
Bragg	2826.4	14.5	34.0	103.0	33.3	42.5	1.0	1.0
Hampton 266A	2676.8	15.4	32.5	103.5	33.0	44.0	1.0	1.0
Harosoy 63	2631.4	15.5	26.0	84.0	21.0	70.0	1.0	1.0
Hark	2199.6	14.7	26.0	84.0	18.5	55.0	0.8	0.8
Grand Mean	3099.8	16.5	40.4	105.9	39.5	53.8	1.1	1.1
Standard Error	115.3	0.3	0.8	0.6	2.5	3.1	0.1	0.1
Coefficient of Variation	7.4	3.5	4.2	1.2	12.8	11.5		
LSD (.05)	326.2	0.8	2.4	1.8	7.1	8.7	0.3	0.4

Region - Asia	Country - Philippines
Site - BPI Economic Garden, Los Banos	Cooperator - B. Legaspi
Latitude - 14° 10' N	Elevation - 15 m
Date planted - June 1, 1973	Date harvested - September, 1973
Amount of moisture - 711.2 mm	
Fertilizer used (kg/ha) - N - 49    P - 21.4    K - 40.8	
Soil type - Clay    pH = 6.0	
Diseases reported - Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>	
	Stem canker - <u>Diaporthe phaseolorum</u> var. <u>caulivora</u>
Insects identified - Corn earworm - <u>Heliothis armigera</u> (Hübner)	
	Bean leaf folder - <u>Sylepta sabinusalis</u> (Walker)
	Green soldier bug - <u>Nezara viridula</u> (L.)



Table 33. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Alutharama, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Hardee	3536.5	16.1	34.8	98.0	46.3	54.3	1.0	1.0
Bragg	3433.6	17.5	29.3	101.3	42.0	52.3	1.0	1.0
Hutton	3417.4	21.5	29.8	103.0	25.5	35.0	1.0	1.0
Lee 68	3390.3	18.7	28.8	95.8	28.5	36.3	1.0	1.0
Semmes	3192.7	19.4	30.0	102.8	34.0	47.5	1.0	1.0
Calland	3150.6	21.1	23.0	92.3	19.5	59.8	1.3	1.3
Clark 63	3010.6	19.1	28.0	90.5	27.8	59.0	1.3	1.0
Cutler 71	3007.7	19.8	24.8	89.8	28.8	58.8	2.0	1.3
Davis	2971.4	17.8	29.5	97.0	29.8	46.8	1.0	1.0
Hampton 266A	2912.2	20.2	29.5	93.5	30.0	42.5	1.0	1.0
Harosoy 63	2832.6	18.2	24.5	83.5	27.3	49.0	1.0	1.0
Bonus	2772.6	19.1	22.8	87.8	17.3	54.0	1.0	1.0
Pickett 71	2593.0	18.3	30.0	103.3	32.8	42.8	1.0	1.0
Improved Pelican	2445.1	13.9	36.3	99.3	59.3	107.8	2.3	1.0
Hill	2374.6	17.0	29.8	84.5	34.5	44.8	1.0	1.0
Dare	2353.4	16.6	29.5	90.8	36.5	48.8	1.3	1.8
Williams	2212.9	20.3	24.8	91.5	21.5	50.8	1.0	1.0
Adelphia	2009.6	16.6	24.8	90.0	21.3	52.0	1.0	1.0
Hark	1746.6	14.4	22.3	77.3	19.5	43.8	1.0	1.0
Jupiter	1098.6	13.9	36.5	117.0	57.3	82.5	1.5	1.5
Grand Mean	2723.1	18.0	28.4	94.4	32.0	53.4	1.2	1.1
Standard Error	281.1	0.8	0.9	1.5	3.5	4.0	0.1	0.1
Coefficient of Variation	20.7	8.7	6.7	3.1	21.7	15.0		
LSD (.05)	795.2	2.2	2.7	4.2	9.8	11.3	11.3	0.4

Region - Asia	Country - Sri Lanka
Site - Alutharama	Cooperator - B. N. Emerson and W. Golden
Latitude - 7° 30' N	Elevation - 266 m
Date planted - May 20, 1973	Date harvested - August, 1973
Amount of moisture - 289.6 mm	
Fertilizer used (kg/ha) - N - 20.5	P - 17.6      K - 61.2
Soil type - Sandy loam	

Table 34. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Alutharama, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Hardee	1936.2	16.6	33.5	97.8	29.5	30.3	1.0	1.0
Jupiter	1757.9	14.9	36.3	98.8	38.0	63.3	1.0	1.0
Improved Pelican	1737.8	12.7	34.3	88.3	36.0	64.0	2.5	1.0
SJ-2	1737.0	14.1	35.5	93.0	34.0	56.5	1.0	1.0
Hutton	1545.3	19.6	26.8	80.8	28.8	31.3	1.0	1.0
Williams	1541.6	18.2	27.8	91.3	27.0	34.0	1.0	1.0
Hampton 266A	1539.5	18.4	28.0	93.5	26.8	28.0	1.0	1.3
Semmes	1530.3	15.8	26.3	87.3	24.3	26.0	1.0	1.0
Pickett 71	1472.4	15.9	26.3	87.3	28.5	32.0	1.0	1.0
Calland	1470.3	17.9	25.5	89.3	32.5	39.8	1.0	1.0
Pb-1	1379.4	12.1	31.0	89.8	27.3	42.8	1.0	2.0
Lee 68	1364.0	17.5	26.5	91.0	28.0	30.8	1.0	1.0
Davis	1356.1	18.0	33.3	96.5	30.8	27.3	1.0	2.5
Harosoy 63	1346.9	17.4	27.0	84.0	29.0	36.0	1.0	1.0
Bragg	1346.5	18.3	26.8	89.0	28.8	34.8	1.0	1.0
Clark 63	1313.6	16.0	28.3	91.3	27.0	35.8	1.0	1.0
TK-5	1274.4	14.6	35.0	82.8	34.8	45.0	1.3	2.0
Adelphia	1209.8	15.6	28.3	88.3	26.5	29.0	1.0	1.0
Tainung (R)-1	1209.4	14.9	33.3	82.5	37.5	46.0	1.0	1.3
Hark	969.8	14.7	27.0	81.8	27.0	30.0	1.0	1.0
Grand Mean	1451.9	16.1	29.8	89.2	30.1	38.1	1.1	1.2
Standard Error	135.8	0.8	0.5	2.0	2.3	2.1	0.1	0.1
Coefficient of Variation	18.7	10.0	3.5	4.5	15.4	10.8		
LSD (.05)	384.1	2.3	1.5	5.7	6.5	5.8	0.2	0.3

Region - Asia	Country - Sri Lanka
Site - Alutharama	Cooperator - B. N. Emerson and W. Golden
Latitude - 7° 30' N	Elevation - 266 m
Date planted - October 31, 1973	Date harvested - February, 1974
Amount of moisture - 1192 mm	
Fertilizer used (kg/ha) - N - 20	P - 26.2      K - 33.3
Soil type - Sandy clay loam	
Local varieties tested - TK-5	
Pb-1	
SJ-2	
Tainung (R)-1	
Diseases reported - Soybean mosaic - Soybean Mosaic Virus	
Soybean rust - <u>Phakopsora pachyrhizi</u>	



Table 35. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Angunukulapalessa, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Harosoy 63	3048.9	19.5	21.5	81.0	28.0	56.5	2.0
Adelphia	2901.0	20.0	23.0	88.5	25.3	48.5	1.8
Hampton 266A	2785.6	20.0	27.3	87.0	35.8	40.8	2.0
Semmes	2684.3	18.2	27.0	89.0	30.5	33.0	1.0
Williams	2657.2	18.2	23.0	84.0	27.0	55.5	1.5
Dare	2566.8	18.0	27.0	87.8	31.0	36.3	1.0
Hark	2380.1	16.8	20.0	78.0	27.0	47.5	2.3
Improved Pelican	2298.4	14.2	33.8	92.0	50.0	65.3	2.0
Pickett 71	2135.4	18.2	27.0	90.5	31.5	27.5	1.3
Davis	2134.6	13.7	28.0	89.5	30.5	33.8	1.0
Cutler 71	2133.3	20.6	23.0	84.5	26.3	49.5	2.0
Lee 68	2126.7	20.2	26.0	91.3	28.5	33.0	1.0
Clark 63	2003.7	13.9	23.3	67.0	24.0	42.0	1.8
Calland	1995.0	19.3	24.3	88.5	23.3	42.3	2.8
Bragg	1988.7	17.9	27.0	89.5	30.8	29.5	1.0
Bonus	1719.1	14.3	23.3	61.8	23.3	42.8	1.5
Hardee	1207.3	14.0	23.8	68.8	14.3	17.8	0.8
Hill	807.2	14.2	28.3	67.8	18.5	14.8	1.0
Hutton	594.7	11.6	28.8	69.8	18.8	15.5	0.8
Grand Mean	2114.1	17.0	27.3	81.9	30.3	40.8	1.6
Standard Error	377.9	2.9	1.9	10.7	2.2	6.6	0.3
Coefficient of Variation	35.8	33.9	13.6	26.2	14.8	32.3	
LSD (.05)	1069.0	8.1	5.3	30.4	6.3	18.7	0.9

Region - Asia	Country - Sri Lanka
Site - Angunukulapalessa	Cooperator - P. Diaz and W. Golden
Latitude - 6° 20' N	Elevation - 10 m
Date planted - June 28, 1973	Date harvested - September, 1973
Amount of moisture - 1174 mm	
Fertilizer used (kg/ha) - N - 33.6	P - 29.3
	K - 56.1
Soil type - Clay	

Table 36. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Bandarawela, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Jupiter	1823.3	22.0	52.0	128.3	42.0	58.3	3.3	1.8
SJ-2	1396.1	12.3	50.8	120.3	40.5	40.8	2.8	1.5
Williams	1312.8	18.1	48.3	123.5	26.3	22.5	1.5	1.0
Hardee	1239.8	18.5	53.0	112.3	26.5	22.0	1.0	1.0
Clark 63	1198.2	15.2	49.5	124.8	27.3	25.0	2.0	1.0
Davis	1177.3	19.3	53.8	118.5	24.5	21.5	1.0	1.0
Lee 68	1177.3	14.6	55.5	100.8	36.3	25.3	1.0	1.0
Pickett 71	1166.9	13.7	53.3	100.5	31.5	25.0	1.0	1.0
Hampton 266A	1135.6	14.6	48.5	110.8	30.5	26.0	1.3	1.0
TK-5	1104.4	13.7	51.8	104.5	41.8	44.0	2.3	1.3
Semmes	1083.6	14.4	50.0	100.8	26.0	19.5	1.0	1.0
Adelphia	1041.9	15.3	50.8	100.5	23.3	20.3	1.3	1.0
Hutton	1010.6	19.9	52.3	124.8	28.3	21.5	1.5	1.0
Improved Pelican	916.9	12.9	55.0	129.0	31.8	33.3	1.3	1.0
Tainung R-1	864.8	14.2	52.0	105.8	44.3	43.5	2.0	2.3
Calland	854.3	15.9	50.5	122.5	23.3	21.0	2.5	1.5
Harosoy 63	791.8	16.3	55.8	122.0	22.3	18.5	1.8	1.3
Hark	604.3	14.5	53.5	123.0	20.0	17.3	1.3	1.3
Bragg	520.9	19.0	52.8	128.5	30.0	24.8	1.5	1.0
Pb-1	469.0	11.8	53.8	131.8	32.5	32.8	2.0	1.5
Grand Mean	1044.5	15.8	52.1	116.6	30.4	28.1	1.7	1.2
Standard Error	106.9	0.4	1.9	3.0	1.7	1.8	0.2	0.2
Coefficient of Variation	20.5	4.8	7.3	5.1	11.1	12.8		
LSD (.05)	302.3	1.1	N.S.	8.4	4.8	5.1	0.7	0.5

Region - Asia	Country - Sri Lanka
Site - Bandarawela	Cooperator - S. Weerasinghe and W. Golden
Latitude - 7° N	Elevation - 1219 m
Date planted - November 17, 1973	Date harvested - March, 1974
Amount of moisture - 523 mm	
Fertilizer used (kg/ha) - N - 22.4	P - 29.3      K - 74.7
Soil type - Clay	pH = 5.0
Local varieties tested - TK-5	
	Pb-1
	SJ-2
	Tainung R-1



Table 37. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Gannoruwa, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Hardee	3987.5	17.0	35.0	105.0	47.5	47.5	1.0	1.0
Calland	3780.3	21.3	26.0	99.0	33.3	66.0	2.0	1.0
Davis	3653.2	19.7	33.0	100.0	31.5	37.0	1.0	1.0
Pickett 71	3552.4	17.2	25.0	99.0	33.5	38.0	1.0	1.0
Hampton 266A	3534.5	21.2	30.0	101.0	32.3	36.8	2.0	1.0
Improved Pelican	3488.2	14.4	35.0	105.0	46.3	87.5	3.0	1.0
Jupiter	3456.1	16.7	34.0	115.0	47.5	85.3	2.0	1.0
Williams	3454.0	21.1	26.0	92.0	32.0	56.0	2.0	1.0
Semmes	3301.5	19.5	33.0	100.0	27.3	31.5	1.0	1.0
Clark 63	3272.3	18.3	26.0	96.0	34.5	56.5	2.0	1.0
Adelphia	3234.4	17.5	26.0	92.0	30.5	50.5	1.0	1.0
Dare	3181.9	11.9	29.0	94.0	40.0	41.5	1.0	1.0
Cutler 71	3167.3	17.4	25.0	92.0	38.3	59.3	2.0	1.0
Lee 68	3155.6	19.6	29.0	96.0	33.8	39.3	1.5	1.0
Harosoy 63	3043.5	19.7	25.0	90.0	32.8	52.3	1.0	1.5
Bragg	2984.8	21.4	29.0	99.0	34.0	37.5	1.0	1.0
Hill	2943.1	14.8	31.0	94.0	40.5	43.8	2.0	1.0
Hutton	2926.4	20.9	30.0	101.0	32.0	33.0	3.0	1.0
Bonus	2879.7	14.7	26.0	96.0	26.0	45.0	1.0	1.0
Hark	2503.0	17.0	24.0	85.0	30.8	39.0	1.0	1.3
Grand Mean	3275.0	18.1	28.9	97.6	35.2	49.2	1.5	1.0
Standard Error	193.6	0.4			2.0	2.5	0.1	0.1
Coefficient of Variation	11.8	4.5			11.3	10.1		
LSD (.05)	547.5	1.1			5.6	7.1	0.2	0.3

Region - Asia

Site - C.A.R.I., Gannoruwa

Latitude - 7° 15' N

Date planted - June 6, 1973

Amount of moisture - 387 mm plus 4 irrigations

Fertilizer used (kg/ha) - N - 20 P - 17.4

Soil type - Clay loam pH = 7.0

Country - Sri Lanka

Cooperator - E. Herath and W. Golden

Elevation - 457 m

Date harvested - September, 1973

K - 33.3

Table 38. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Gannoruwa, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Semmes	2268.8	19.5	29.0	92.0	29.3	32.0	1.0	1.0
Davis	2172.5	19.7	33.0	96.0	32.5	36.5	1.3	1.3
Lee 68	2170.4	19.6	29.0	88.0	34.3	36.5	1.0	1.0
Bragg	2166.7	21.4	30.0	90.0	32.8	39.5	1.0	1.0
Hardee	2110.0	17.0	34.0	96.0	31.5	40.0	1.0	1.0
Pickett 71	2097.5	17.2	30.0	88.0	32.0	35.3	1.0	1.0
Hampton 266A	2026.2	21.2	30.0	88.0	34.5	39.5	1.0	1.0
SJ-2	1935.8	14.8	34.5	96.0	43.8	70.0	2.0	1.0
Tainung R-1	1933.3	14.7	36.0	96.0	41.5	67.5	2.0	1.0
Calland	1922.5	21.3	28.0	90.0	28.3	44.8	2.0	1.0
Hutton	1896.2	20.9	29.0	90.0	29.3	34.3	1.0	1.0
Harosoy 63	1863.9	19.7	30.0	84.0	25.0	42.5	1.0	1.0
Improved Pelican	1859.5	14.4	34.0	96.0	39.0	65.5	1.8	1.0
TK-5	1824.9	17.4	35.0	86.0	39.0	54.0	2.0	2.0
Williams	1785.8	21.1	32.0	90.0	28.5	38.8	1.3	1.0
Clark 63	1652.0	18.3	30.0	88.0	23.5	39.8	1.0	1.0
Pb-1	1618.2	11.9	32.0	86.0	30.3	42.8	1.0	1.0
Adelphia	1575.3	17.5	31.0	88.0	31.5	34.0	1.0	1.0
Hark	1482.4	17.0	27.0	80.0	22.3	32.3	1.0	1.0
Jupiter	1421.5	16.7	36.0	106.0	55.0	96.5	3.0	1.0
Grand Mean	1889.1	18.1	31.5	90.7	33.2	46.1	1.4	1.1
Standard Error	135.5	0.4			1.0	1.4	0.1	0.1
Coefficient of Variation	14.4	4.5			5.9	5.9		
LSD (.05)	383.4	1.1			2.8	3.9	0.4	0.2

Region - Asia	Country - Sri Lanka
Site - C.A.R.I., Gannoruwa, Peradeniya	Cooperator - E. Herath and W. Golden
Latitude - 7° 15' N	Elevation - 457 m
Date planted - October 25, 1973	Date harvested - January, 1974
Amount of moisture - 395 mm plus 8 irrigations	
Fertilizer used (kg/ha) - N - 20    P - 26.2    K - 33.3	
Soil type - Clay loam	
Local varieties tested - TK-5	
Pb-1	
SJ-2	
Tainung (R)-1	
Diseases reported - Soybean mosaic - Soybean Mosaic Virus	
Soybean rust - <u>Phakopsora pachyrhizi</u>	
Bacterial blight - <u>Pseudomonas glycinea</u>	



Table 39. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Maha Illuppallama, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Jupiter	2831.8	22.2	39.3	108.8	44.3	75.3
Pickett 71	2392.6	21.4	29.0	94.5	20.8	26.5
Bragg	2348.8	22.8	29.8	95.0	29.3	33.5
Hampton 266A	2297.1	23.0	29.3	93.8	21.8	27.0
Adelphia	2280.5	23.4	26.5	93.8	34.3	43.5
Williams	2278.8	25.6	26.5	85.3	31.3	44.5
Davis	2262.5	21.8	33.3	94.5	27.8	32.8
Hutton	2229.2	25.2	30.0	97.5	22.5	26.3
Lee 68	2217.5	20.6	28.0	88.0	19.0	25.8
Dare	2210.4	21.4	30.5	90.3	23.5	30.5
Bonus	2201.3	21.7	25.5	93.0	31.8	37.5
Clark 63	2193.8	22.3	26.5	91.5	31.0	43.0
Tainung R-1	2105.8	20.9	28.0	89.8	20.3	24.0
Semmes	2091.7	21.6	28.3	92.8	20.3	25.0
Improved Pelican	2035.0	17.1	34.5	97.3	42.3	67.0
Pb-1	1961.6	22.1	29.3	96.0	24.3	29.5
SJ-2	1906.6	21.5	33.5	88.8	40.3	51.3
Hill	1884.1	19.2	32.5	87.5	28.8	30.5
TK-5	1875.8	21.9	32.8	86.0	42.3	50.5
Harosoy 63	1850.0	22.8	25.5	80.5	32.0	39.5
Grand Mean	2172.7	21.9	29.9	92.2	29.4	38.2
Standard Error	103.9	0.5	0.7	2.3	1.6	1.5
Coefficient of Variation	9.6	4.5	4.5	5.0	11.0	7.8
LSD (.05)	293.9	1.4	1.9	6.5	4.6	4.2

Region - Asia	Country - Sri Lanka
Site - Maha Illuppallama	Cooperator - A. de Zoysa and W. Golden
Latitude - 8° 5' N	Elevation - 138 m
Date planted - June 21, 1973	Date harvested - September, 1973
Amount of moisture - 207.3 mm plus 16 irrigations	
Fertilizer used (kg/ha) - N - 22.4 P - 19.5 K - 37.3	
Soil type - Sandy clay loam pH = 5.8	
Local varieties tested - SJ-2	
Pb -1	
Tainung R-1	
TK-5	
Diseases reported - Yellow mosaic - Bean Yellow Mosaic Virus	
Insects identified - Green stink bug <u>Nezara viridula</u> (L.)	

Table 40. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Maha Illuppallama, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Williams	4003.3	20.3	31.5	82.5	24.3	43.0
Hampton 266A	3499.4	19.4	30.5	79.0	25.8	25.5
Hardee	3249.8	18.0	33.5	86.5	29.8	33.8
Pb-1	3104.0	12.9	31.5	74.5	26.3	43.5
Bragg	2980.2	19.6	28.5	76.5	35.0	36.3
Davis	2927.7	19.6	33.5	84.0	29.0	32.3
Semmes	2924.3	18.6	26.5	81.5	30.8	29.3
SJ-2	2654.3	13.7	35.5	84.0	35.8	59.0
Clark 63	2625.9	17.9	26.5	76.5	24.5	47.0
Tainung (R)-1	2606.4	16.6	33.5	74.5	38.3	46.0
Adelphia	2600.9	18.2	24.5	76.5	27.8	44.8
Lee 68	2516.3	19.0	33.5	76.5	33.0	32.0
Pickett 71	2485.9	16.5	28.5	76.5	31.0	30.0
TK-5	2449.2	17.5	33.5	75.0	39.5	48.0
Hutton	2424.2	20.3	30.5	79.3	29.3	29.0
Improved Pelican	2402.1	12.5	35.5	82.5	41.8	69.5
Harosoy 63	2290.5	15.7	24.5	73.5	30.3	43.3
Calland	2272.5	16.9	30.5	76.5	33.0	51.5
Jupiter	2217.1	19.4	35.8	93.5	43.0	75.0
Hark	1724.9	14.5	20.5	73.5	26.3	36.8
Grand Mean	2698.0	17.4	30.4	79.1	31.7	42.8
Standard Error	214.4	0.3	0.1	0.9	1.0	1.5
Coefficient of Variation	15.9	3.4	0.4	2.2	6.6	7.2
LSD (.05)	606.4	0.8	0.2	2.5	3.0	4.3

Region - Asia	Country - Sri Lanka
Site - Maha Illuppallama	Cooperator - A. de Zoysa and W. Golden
Latitude - 8° 5' N	Elevation - 137.7 m
Date planted - November 23, 1973	Date harvested - February, 1974
Amount of moisture - 405 mm	
Fertilizer used (kg/ha) - N - 23.0    P - 336.3    K - 48.2	
Soil type - Sandy clay loam    pH = 6.4	
Local varieties tested - TK-5	
Pb-1	
SJ-2	
Tainung (R)-1	



Table 41. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Paranthan, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Jupiter	1381.5	15.8	43.5	103.3	40.0	53.0
Hardee	998.5	15.2	34.8	93.0	23.3	28.5
Improved Pelican	998.1	13.3	36.0	90.3	29.5	39.0
TK-5	976.9	14.7	33.8	89.3	34.0	41.0
SJ-2	955.6	12.6	33.3	93.3	30.8	40.8
Lee 68	861.4	15.4	32.8	92.8	22.8	29.3
Semmes	858.9	15.5	38.8	94.0	26.3	24.3
Tainung (R)-1	825.2	15.3	32.3	89.5	27.8	36.5
Harosoy 63	776.8	15.8	32.5	87.8	21.3	30.0
Adelphia	752.2	15.1	32.8	93.0	25.0	28.8
Pb-1	745.1	11.3	42.0	92.3	29.5	28.8
Hutton	715.2	18.9	39.5	95.0	25.8	27.5
Bragg	705.6	15.7	36.8	93.3	28.5	28.0
Pickett 71	696.0	16.2	35.0	94.8	28.0	23.5
Davis	681.0	14.9	36.8	92.3	24.8	24.8
Calland	678.5	17.6	36.0	90.5	27.8	36.8
Williams	674.3	16.6	36.5	90.8	25.5	28.3
Hampton 266A	641.4	18.1	33.5	94.8	24.8	27.3
Clark 63	620.1	15.0	37.5	93.3	24.8	31.3
Hark	592.6	12.4	35.8	85.5	22.0	28.5
Grand Mean	806.6	15.3	36.0	92.4	27.4	31.8
Standard Error	94.6	0.3	2.8	0.6	2.5	1.5
Coefficient of Variation	23.5	3.6	15.8	1.3	18.4	9.6
LSD (.05)	267.7	N.S.	8.1	N.S.	7.1	4.3

Region - Asia	Country - Sri Lanka
Site - Paranthan	Cooperator - S. Virekanandhan and W. Golden
Latitude - 9° 35' N	Elevation - 10.2 m
Date planted - November 18, 1973	Date harvested - Febraury, 1974
Amount of moisture - 902 mm	
Fertilizer used (kg/ha) - N - 50.4	P - 25.1
	K - 32.0
Soil type - Sandy loam	
Local varieties tested - Pb-1	
SJ-2	
Tainung (R)-1	
TK-5	

Table 42. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Ratmalagara, Sri Lanka, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Hardee	534.3	11.8	31.8	77.3	40.8	31.5	1.0	1.0
Hampton 266A	502.2	14.0	27.8	72.0	39.5	36.3	1.0	1.3
Pb-1	496.8	9.5	32.3	69.3	37.8	32.5	2.0	1.0
Williams	474.7	15.9	32.0	71.3	29.8	26.8	1.0	1.0
Adelphia	474.3	14.1	28.0	71.0	29.3	29.5	1.0	1.0
Improved Pelican	464.0	10.5	34.3	72.0	44.3	40.8	1.0	1.0
Clark 63	460.9	13.9	27.5	70.0	29.8	28.5	1.0	1.0
Harosoy 63	456.8	13.1	25.8	64.0	28.3	24.8	1.0	1.0
Semmes	452.6	12.0	27.5	70.5	32.0	31.3	1.0	1.0
Pickett 71	452.2	10.9	27.8	70.0	39.0	31.8	1.0	1.0
Davis	435.9	13.0	30.5	74.3	37.0	32.5	1.0	1.0
SJ-2	431.8	10.4	36.0	77.0	46.0	42.0	1.0	1.0
Lee 68	430.1	12.1	27.8	69.8	39.8	35.0	1.0	1.0
Calland	420.5	14.4	28.5	70.8	34.3	33.3	1.0	1.0
Hutton	378.0	13.2	27.8	70.8	35.5	31.5	1.0	1.0
Bragg	320.9	12.8	26.8	70.5	34.5	31.0	1.3	1.0
Hark	296.7	12.0	26.8	66.0	27.5	24.0	1.0	1.0
Jupiter	257.6	13.2	40.0	94.0	68.3	66.5	1.0	1.0
Tainung (R)-1	255.5	13.9	32.8	71.3	50.3	40.8	3.0	3.3
TK-5	254.2	13.7	33.8	71.3	49.8	42.5	1.0	2.5
Grand Mean	412.5	12.7	30.3	72.1	38.7	34.6	1.2	1.2
Standard Error	49.5	0.6	0.9	0.5	1.9	2.3	0.1	0.1
Coefficient of Variation	24.0	9.4	6.0	1.4	9.9	13.0		
LSD (.05)	140.0	1.7	2.5	1.4	5.4	6.4	0.4	0.3

Region - Asia	Country - Sri Lanka
Site - Ratmalagara	Cooperator - N. de Silva, M. Martin, A. Silva, and W. Golden
Latitude - 7° N	Elevation - 30 m
Date planted - December 6, 1973	Date harvested - February, 1974
Amount of moisture - 338 mm	
Fertilizer used (kg/ha) - N - 22.4    P - 29.3    K - 37.3	
Soil type - Clay	
Local varieties tested - TK-5	
Pb-1	
SJ-2	
Tainung (R)-1	
Diseases reported - Soybean rust - <u>Phakopsora pachyrhizi</u>	



Table 43. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Ping Tung, Taiwan, 1973.

Variety	Yield (kg/ha)	100 - Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity	Lodging Score	Shattering Score
Cutler 71	1042.7	17.5	35.3	90.5	26.0	49.8	1.3	1.0
Lee 68	971.9	16.6	36.5	93.3	24.3	33.8	1.3	1.0
Bonus	926.0	14.5	33.8	89.0	26.0	51.3	1.8	1.0
Bragg	908.9	15.3	37.0	94.5	29.3	40.8	1.0	1.0
Harosoy 63	851.4	15.0	34.8	87.0	24.0	44.0	2.5	1.8
Dare	833.9	16.5	38.3	91.8	25.0	46.3	1.5	1.0
Williams	832.2	13.3	36.3	90.5	24.8	46.5	1.3	1.0
Pickett 71	823.9	14.8	36.0	97.3	27.5	30.5	1.0	1.0
Clark 63	777.2	16.5	36.0	88.8	25.3	49.8	2.0	1.3
Hardee	773.5	13.6	39.8	116.0	24.8	35.8	1.0	1.3
Hill	757.7	13.3	44.0	95.0	29.3	38.5	3.3	1.0
Davis	706.0	13.0	42.0	95.8	25.8	35.3	1.0	1.0
Adelphia	677.6	13.6	33.8	88.0	22.0	40.5	2.3	1.3
Hutton	654.7	16.8	36.5	96.0	24.5	28.5	1.0	1.0
Calland	653.5	14.9	33.5	94.5	29.3	60.0	1.5	1.0
Semmes	518.0	14.8	36.3	96.3	21.3	31.3	1.0	1.0
Hampton 266A	503.0	14.9	36.3	95.0	27.0	31.5	1.3	1.0
Hark	497.2	12.6	34.8	88.0	20.8	36.5	3.0	1.3
Grand Mean	761.6	15.0	36.7	93.7	25.4	40.6	1.6	1.1
Standard Error	103.7	0.7	0.9	0.8	1.8	4.7	0.2	0.1
Coefficient of Variation	27.2	9.5	5.1	1.6	13.8	23.3	N.S.	N.S.
LSD (.05)	293.4	2.0	2.7	2.2	5.0	13.3	N.S.	N.S.

Region - Asia	Country - Taiwan
Site - Kaohsiung District Agricultural Improvement Station, Ping Tung	Cooperator - Hung and Sundar
Latitude - 22° 30' N	
Date planted - March 12, 1974	Date harvested - June, 1974
Fertilizer used (kg/ha) - N - 20    P - 24    K - 50	
Soil type - Silt	
Diseases reported - Rust	- <u>Phakopsora pachyrhizi</u>
	Purple seed stain - <u>Cerospora kikuchii</u>
	Dwarf of soybean - Soybean Dwarf Virus
	Mosaic - Soybean Mosaic Virus
Insects identified - Black cutworm	- <u>Agrotis ipsilon</u> (Hufnagel)
	Lima-bean pod borer - <u>Etiella zinckenella</u> (Treitschke)
	Green stink bug - <u>Nezara viridula</u> (L.)

Table 44. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Shanhua, Taiwan, 1973.

Variety	Yield (kg/ha)	100 - Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Shih Shih	1220.7	12.3	43.3	91.0	34.0	50.3
Tainung No. 4	1192.7	15.3	52.0	100.8	47.0	63.0
Williams	1139.8	12.7	36.0	87.3	17.0	43.8
Hill	1120.4	11.0	50.0	99.0	36.8	55.5
Bonus	1043.1	13.4	36.0	91.0	17.3	39.5
Hark	1033.3	12.2	36.0	81.0	15.5	30.8
Harosoy 63	1016.0	13.0	36.0	81.5	17.0	36.5
Bragg	1015.6	11.4	41.0	92.0	26.0	34.3
Dare	1014.4	10.7	43.0	92.0	34.3	46.8
Davis	957.3	9.6	49.8	99.5	34.8	47.8
Adelphia	911.8	11.4	36.0	84.5	17.0	37.5
Hutton	891.6	10.4	41.0	95.0	20.3	32.8
Semmes	890.0	10.4	41.0	91.0	20.8	28.3
Clark 63	812.7	12.9	36.0	91.0	17.0	48.5
Hardee	769.9	10.5	49.8	84.0	32.0	41.0
Pickett 71	683.7	11.8	41.0	91.0	22.5	27.0
Lee 68	455.5	11.7	41.0	91.0	20.0	26.8
Hampton 266A	444.7	12.5	41.0	92.5	21.5	33.0
Improved Pelican	329.9	8.5	52.8	112.0	43.3	100.0
Grand Mean	891.7	11.7	42.2	91.9	26.0	43.3
Standard Error	63.5	0.4	0.1	3.6	0.8	1.8
Coefficient of Variation	14.2	6.6	0.7	7.7	6.4	8.3
LSD (.05)	179.7	N.S.	N.S.	10.0	2.3	5.1

Region - Asia	Country - Taiwan
Site - AVRDC, Shanhua	Cooperator - S. Shanmugasundaram
Latitude - 23° N	Elevation - 9 m
Date planted - March 5, 1974	Date harvested - June, 1974
Fertilizer used (kg/ha) - N - 60    P - 100    K - 120	
Soil type - Silt	
Local varieties tested - Tainung No. 4	
Shih Shih	
Diseases reported - Pod and stem blight	- <u>Diaporthe phaseolorum</u> var. <u>sojae</u>
Soybean rust	- <u>Phakopsora pachyrhizi</u>
Purple seed stain	- <u>Cercospora kikuchii</u>
Insects identified - Green stink bug	- <u>Nezara viridula</u> (L.)

Table 45. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Chiangmai University, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Williams	2199.2	18.4	48.0	113.3	20.8	40.0
Hampton 266A	1880.4	18.2	49.3	118.5	33.0	45.5
Calland	1804.1	16.8	48.0	113.3	20.8	34.0
Cutler 71	1794.9	17.8	48.0	115.0	20.3	40.0
Clark 63	1755.8	14.4	48.0	113.5	20.5	41.8
Adelphia	1755.8	14.4	48.0	113.3	19.3	35.3
SJ-1	1692.4	11.4	57.5	113.3	40.0	74.3
Dare	1655.3	16.0	52.5	120.3	28.8	44.8
Bragg	1617.4	17.4	48.0	118.5	25.3	36.0
Hardee	1600.7	14.2	57.3	120.0	28.8	43.3
Lee 68	1595.7	15.7	48.3	115.0	29.5	39.0
Davis	1526.6	14.8	52.3	125.3	21.8	42.0
Hutton	1508.2	18.2	48.8	118.8	23.0	31.3
Pickett 71	1417.4	15.3	49.0	116.5	25.5	32.0
Semmes	1336.5	14.7	49.0	115.0	20.5	28.8
Improved Pelican	1309.0	10.7	59.0	118.5	40.0	76.8
Bonus	1002.7	14.6	48.0	113.5	18.3	34.0
SJ-2	988.9	10.0	57.3	127.0	43.3	89.3
Hill	905.2	13.2	57.5	120.3	28.0	31.5
Jupiter	556.4	12.6	68.8	140.0	58.8	71.0
Grand Mean	1495.1	14.9	52.1	118.4	28.3	45.5
Standard Error	184.8	0.6	0.5	2.0	2.4	3.4
Coefficient of Variation	24.7	8.3	1.9	3.4	17.3	15.1
LSD (.05)	522.7	1.7	N.S.	5.7	6.9	9.7



Region - Asia	Country - Thailand
Site - Faculty of Agriculture, Chiangmai	Cooperator - D. Tiyaawalee
University	
Latitude - 18° 47' N	Elevation - 314 m
Date planted - July 17, 1973	Date harvested - October 1973
Amount of moisture - 859 mm	
Fertilizer used (kg/ha) - N - 12.5    P - 37.5    K - 50	
Soil type - Silt    pH = 5.91	
Local varieties tested - SJ-2	
SJ-1	
Diseases reported - Bacterial blight	- <u>Pseudomonas glycinea</u>
Soybean mosaic	- Soybean Mosaic Virus
Soybean rust	- <u>Phakopsora pachyrhizi</u>
Bacterial pustule	- <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>

Table 46. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Chiangmai University, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Hardee	1068.6	11.0	38.5	100.0	28.8	37.5	2.0
Pickett 71	835.1	11.4	32.5	99.5	27.5	32.3	1.8
Cutler 71	792.5	12.7	33.3	85.3	32.8	46.0	1.0
Improved Pelican	776.8	8.3	42.0	99.0	64.8	66.3	3.5
Calland	773.5	11.6	31.0	95.5	28.3	52.0	1.8
SJ-1	757.6	8.6	38.0	96.3	37.3	70.0	4.0
Clark 63	749.6	11.8	31.8	87.3	29.0	42.0	1.5
SJ-2	736.1	8.4	42.0	100.0	55.5	57.8	4.3
Semmes	733.4	11.1	34.0	99.0	26.3	28.0	1.0
Lee 68	566.1	13.2	31.0	100.0	32.5	31.8	2.5
Williams	547.3	12.2	33.3	85.3	29.5	42.8	1.3
Davis	494.0	9.3	34.8	89.0	30.0	37.0	1.3
Bonus	492.1	12.0	31.8	85.0	28.0	38.5	1.0
Dare	467.1	12.2	34.0	83.0	28.8	33.3	1.0
Jupiter	365.2	8.3	42.0	100.3	52.0	64.0	2.0
Bragg	362.5	10.2	34.0	94.5	34.0	34.3	2.3
Adelphia	296.9	10.4	33.3	80.0	29.8	36.0	1.0
Hill	239.2	12.7	34.0	100.0	31.0	36.8	3.5
Hutton	196.5	11.2	34.0	97.5	19.5	23.0	1.3
Hampton 266A	175.4	9.1	34.0	84.5	33.0	34.8	1.3
Grand Mean	571.3	10.7	35.0	93.0	33.9	42.2	2.0
Standard Error	78.5	0.4	0.4	2.2	2.6	1.8	0.4
Coefficient of Variation	27.5	6.8	4.8	15.1	8.6	39.0	
LSD (.05)	222.1	1.0	6.3	7.2	5.2	1.1	N.S.

Region - Asia	Country - Thailand
Site - Chiangmai University	Cooperator - D. Tiyawalee
Latitude - 18° 47' N	Elevation - 314 m
Date planted - December 26, 1973	Date harvested - May, 1974
Amount of moisture - irrigated	
Fertilizer used (kg/ha) - N - 1      P - 3      K - 4	
Soil type - Sandy loam	
Local varieties tested - SJ-1	
	SJ-2
Diseases reported - Bacterial pustule	- <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>
Mosaic	- Soybean Mosaic Virus

Table 47. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Khon Kaen, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Davis	1032.7	16.7	38.3	106.0	19.3	22.0	1.0	1.0
Jupiter	956.5	17.1	40.0	93.0	19.5	19.5	1.0	1.0
Hill	907.6	12.8	37.0	90.5	26.5	26.3	1.0	1.5
Improved Pelican	868.2	12.1	35.0	91.8	17.5	25.3	1.0	1.5
SJ-2	851.4	13.6	39.8	106.0	27.0	37.3	1.0	1.5
Hardee	829.9	14.5	35.0	94.5	15.5	18.3	1.0	1.0
Hutton	786.9	15.8	35.0	91.8	21.5	21.3	1.0	1.0
Clark 63	785.6	14.3	32.0	92.3	17.8	24.8	1.0	1.0
Bragg	779.7	16.0	33.5	91.0	19.8	21.0	1.0	1.0
No. 29	778.6	10.0	33.8	93.0	16.8	68.0	4.0	4.0
Semmes	769.6	12.9	30.5	93.0	16.3	17.3	1.0	1.0
Williams	767.7	15.0	33.5	89.3	17.8	21.0	1.0	1.0
Hampton 266A	739.1	17.0	29.0	93.0	19.5	19.5	1.0	1.0
Bonus	735.9	15.3	29.0	94.8	18.0	21.8	1.0	2.0
Adelphia	735.4	14.2	32.0	94.8	16.5	21.8	1.0	1.0
No. 945	698.9	13.5	35.5	89.3	21.5	37.5	1.0	3.3
Lee 68	694.0	13.5	29.0	92.3	19.0	19.8	1.0	1.0
Dare	666.5	11.9	35.0	94.8	18.8	21.0	1.0	1.0
Pickett 71	608.1	13.5	33.5	93.0	17.0	18.0	1.0	1.0
Harosoy 63	605.0	14.8	32.0	91.8	18.0	20.3	1.0	1.3
Grand Mean	779.9	14.2	33.9	94.4	19.7	26.5	1.2	1.4
Standard Error	74.5	0.7	1.7	1.4	1.1	1.3	0.1	0.3
Coefficient of Variation	19.1	10.0	6.9	3.0	10.9	9.8		
LSD (.05)	210.7	2.0	3.3	4.0	3.0	3.7	0.3	0.8

Region - Asia	Country - Thailand
Site - NEAC, Tha Phra, Khon Kaen	Cooperator - Prinya S. and V. Finkner
Latitude - 16° 36' N	Elevation - 170 m
Date planted - June 14, 1973	Date harvested - September, 1973
Amount of moisture - 431 mm	
Fertilizer used (kg/ha) - N - 18.8	P - 32.7
	K - 62.5
Soil type - Sand	
Local varieties tested - SJ-2	



Table 48. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Khon Kaen, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Hardee	618.5	12.1	39.0	115.5	24.8	26.3
Pickett 71	527.9	14.7	28.5	108.0	19.5	35.3
Hampton 266A	385.0	15.7	32.5	114.5	25.0	25.0
Semmes	349.9	12.5	31.0	109.5	20.8	20.8
Lee 68	322.2	18.5	28.5	103.5	20.0	21.5
Dare	320.9	15.8	30.5	98.0	21.0	67.5
Davis	314.0	13.9	33.5	99.3	19.5	19.5
Harosoy 63	252.5	12.1	24.5	80.3	21.0	27.0
Hill	244.3	7.2	24.3	45.0	13.5	12.0
Hark	234.8	11.8	22.5	81.3	18.5	22.0
Clark 63	177.6	16.0	26.5	90.5	20.0	26.3
Bragg	153.6	14.8	31.0	112.8	26.3	30.0
SJ-2	133.1	16.4	41.5	124.3	34.0	56.5
Calland	105.7	14.5	27.0	89.3	20.5	24.3
Hutton	100.1	10.3	31.0	80.0	21.3	15.8
Adelphia	92.6	13.9	24.0	112.0	16.3	18.3
Williams	87.7	14.5	26.0	117.5	16.5	20.5
Improved Pelican	70.7	13.3	41.5	139.3	29.3	138.5
Bonus	48.3	14.7	26.5	87.8	20.0	23.3
Grand Mean	238.9	13.8	30.0	100.4	21.4	33.2
Standard Error	103.8	1.8	1.9	12.0	1.5	20.5
Coefficient of Variation	86.9	26.5	12.6	24.0	13.7	123.8
LSD (.05)	293.7	5.2	5.3	34.0	4.2	58.1

Region - Asia	Country - Thailand
Site - NEAC, Tha Phra, Khon Kaen	Cooperator - Prinya S. and V. Finkner
Latitude - 16° 36' N	Elevation - 170 m
Date planted - November 8, 1973	Date harvested - February, 1974
Amount of moisture - 395 mm (mostly irrigation)	
Soil type - sand      pH = 6.1	
Local varieties tested - SJ-2	
No. 945	
No. 29	

Table 49. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Lop Buri, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
SJ-2	1429.5	8.8	36.0	62.3	56.8	71.5
SJ-1	1379.4	9.7	32.8	83.0	52.3	67.5
Improved Pelican	1341.9	8.3	36.0	83.0	55.3	85.8
Hutton	1060.8	14.2	21.3	62.3	25.0	27.3
Hardee	1026.9	10.6	32.0	82.8	34.5	38.0
Hampton 266A	920.2	13.2	28.0	81.0	38.0	34.3
Bonus	888.5	12.1	24.0	81.5	22.5	47.5
Bragg	884.3	20.5	27.0	82.5	42.3	37.0
Lee 68	873.1	13.4	26.0	71.3	34.3	28.3
Hill	857.3	19.2	28.0	77.0	35.8	32.5
Dare	822.7	16.4	27.5	80.5	33.5	30.8
Pickett 71	532.2	15.7	27.0	78.5	35.3	31.3
Williams	548.0	13.8	18.0	83.0	27.5	65.3
Harosoy 63	528.0	13.7	24.0	81.0	28.0	58.8
Semmes	528.0	14.7	28.0	79.5	38.0	32.3
Hark	527.2	10.4	22.5	79.5	22.3	43.3
Clark 63	494.3	12.8	24.8	81.5	29.5	59.5
Adelphia	199.2	12.7	24.0	81.0	23.8	53.0
Davis	188.0	11.4	27.5	81.5	34.5	34.3
Grand Mean	791.0	13.2	27.8	78.6	36.4	45.4
Standard Error	264.7	2.0	2.1	7.0	3.0	6.0
Coefficient of Variation	66.9	30.8	15.1	17.9	16.4	26.6
LSD (.05)	748.6	5.8	6.0	19.9	8.5	17.1

Region - Asia	Country - Thailand
Site - Phrabhadabath Experiment Station, Lop Buri	Cooperator - A. Nalampang
Latitude - 14° 30' N	Elevation - 30 m
Date planted - August 10, 1973	Date harvested - November, 1973
Amount of moisture - 606 mm	
Fertilizer used (kg/ha) - N - 18.8	P - 24.5      K - 31.2
Soil type - Silt	
Local varieties tested - SJ-2	
	SJ-1
Diseases reported - Bacterial blight	- <u>Pseudomonas glycinea</u>
Mosaic	- Soybean Mosaic Virus

Table 50. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Maejo Agricultural Experiment Station, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Clark 63	1686.7	16.1	29.8	85.3	34.8	53.8	1.0	1.0
Williams	1447.5	15.0	28.0	84.3	33.8	49.5	1.0	1.3
Bonus	1429.7	15.7	28.5	84.3	35.3	49.0	1.0	2.0
Hardee	1311.2	14.3	34.5	94.5	34.5	41.3	1.0	1.0
Hark	1269.6	12.9	24.0	81.0	38.3	46.3	1.0	1.3
Hill	1258.3	14.1	31.3	86.5	42.3	40.0	1.0	1.0
Improved Pelican	1241.5	9.4	40.0	102.0	70.5	85.5	2.8	1.0
Pickett 71	1147.4	13.9	31.3	94.0	34.0	42.5	1.0	1.0
Harosoy 63	1072.9	13.8	25.5	81.0	33.8	42.8	1.0	2.3
Adelphia	1037.3	13.1	27.0	83.5	30.5	40.0	1.0	3.0
SJ-2	1009.7	9.2	45.0	102.0	71.3	77.0	2.3	1.0
Davis	1007.4	14.9	34.0	94.0	31.0	38.0	1.0	4.0
Lee 68	988.7	13.3	32.0	95.3	31.8	36.3	1.0	1.5
SJ-1	979.5	8.7	41.3	89.5	79.0	87.5	2.0	1.5
Dare	965.2	13.7	31.3	94.5	33.0	40.5	1.0	1.0
Bragg	950.6	14.2	31.0	90.0	37.5	43.8	1.0	1.0
Semmes	911.0	14.0	31.0	96.0	32.5	37.3	1.0	1.0
Hutton	763.4	14.7	32.0	90.3	30.5	40.3	1.0	1.0
Hampton 266A	632.7	11.4	31.0	88.5	38.0	43.8	1.0	1.0
Grand Mean	1111.1	13.3	32.0	90.3	40.6	49.2	1.2	1.5
Standard Error	105.9	0.4	0.6	0.5	3.2	3.9	0.1	0.2
Coefficient of Variation	19.4	5.4	3.8	1.0	15.7	16.4		
LSD (.05)	305.3	N.S.	N.S.	N.S.	9.0	11.4	0.2	0.4



Region - Asia	Country - Thailand
Site - Maejo Agricultural Experiment Station, Chiangmai	Cooperator - A. Nalampang
Latitude - 18° 14' N	Elevation - 317 m
Date planted - July 12, 1973	Date harvested - October, 1973
Amount of moisture - 943 mm	
Fertilizer used (kg/ha) - N - 7.5    P - 9.8    K - 12.5	
Soil type - Sandy clay	
Local varieties tested - SJ-2	
SJ-1	
Diseases reported - Soybean rust - <u>Phakopsora pachyrhizi</u>	

Table 51. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Maejo Agricultural Experiment Station, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
SJ-1	1884.5	12.7	64.0	126.0	49.0	109.5	2.2	2.0
Davis	1777.0	14.8	57.5	126.0	31.2	37.2	1.0	1.0
Dare	1714.0	13.9	54.7	106.5	29.2	36.2	1.0	1.0
Clark 63	1611.5	13.1	47.7	102.0	25.7	37.2	1.0	1.0
Cutler 71	1603.2	16.1	48.2	100.0	33.7	47.5	1.0	1.0
SJ-2	1591.9	12.4	63.5	126.0	43.2	90.7	2.2	1.0
Williams	1452.7	13.8	48.2	101.2	23.0	33.7	1.0	1.0
Hill	1450.2	11.7	59.5	116.0	32.5	39.7	1.5	1.0
Improved Pelican	1411.1	12.9	59.0	107.2	31.2	53.7	1.0	1.0
Hardee	1347.3	12.0	58.7	110.5	23.7	29.7	1.0	1.0
Lee 68	1346.9	11.5	50.2	95.5	26.5	32.5	1.0	1.0
Adelphia	1338.6	12.7	47.0	102.7	25.2	31.7	1.0	2.0
Harosoy 63	1312.7	14.8	47.0	96.7	20.2	29.5	1.0	2.0
Bonus	1266.5	13.5	47.5	97.0	22.7	30.0	1.0	2.0
Semmes	1254.0	12.6	53.2	99.5	18.2	23.5	1.0	2.2
Pickett 71	1176.0	11.5	53.2	98.5	18.7	24.5	1.0	1.0
Hutton	1133.5	14.5	53.5	102.7	18.0	23.5	1.0	1.0
Hark	1105.2	13.1	45.7	95.5	18.2	23.2	1.0	1.7
Bragg	980.1	13.4	54.0	95.7	21.5	27.7	1.0	1.0
Hampton 266A	961.4	13.1	53.7	106.7	18.7	23.7	1.0	1.0
Grand mean	1385.9	13.2	53.3	105.6	26.5	39.2	1.1	1.3
Standard Error	116.2	0.5	0.4	0.6	1.8	2.8	0.1	0.1
Coefficient of Variation	16.8	7.9	1.6	1.2	13.2	14.2	17.1	12.1
LSD (.05)	328.8	1.5	1.2	1.8	5.0	7.9	0.3	0.2

Region - Asia	Country - Thailand
Site - Maejo Agricultural Experiment Station, Chiangmai	Cooperator - A. Nalampang
Latitude - 18° 14' N	Elevation - 317 m
Date planted - December 21, 1973	Date harvested - April, 1974
Amount of moisture - irrigation	
Fertilizer used (kg/ha) - N - 18 P - 23.5 K - 30	
Soil type - Sandy clay	
Local varieties tested - SJ-2	
	SJ-1

Table 52. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Suwan Farm, Thailand, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Calland	2472.6	20.5	28.0	90.0	36.5	43.8	1.0	1.0
Davis	2292.1	18.1	32.0	90.0	36.5	34.8	1.0	1.0
Hardee	2209.6	17.5	46.0	90.0	33.5	39.0	1.0	1.0
Lee 68	2135.8	18.6	28.0	90.0	37.0	26.5	1.0	1.0
Clark 63	2097.1	17.3	28.0	90.0	34.3	36.8	1.3	1.0
Improved Pelican	2090.0	14.4	32.0	90.0	37.5	32.3	1.0	1.0
Cutler 71	2054.6	18.8	28.0	87.0	36.8	39.3	1.5	1.0
Semmes	1889.5	17.4	31.0	90.0	34.0	20.0	1.0	1.0
Hampton 266A	1875.4	19.7	31.0	90.0	37.0	27.8	1.0	1.0
Hutton	1854.5	20.5	32.0	96.8	34.8	26.8	1.0	1.0
Pickett 71	1848.3	17.3	28.0	88.5	36.3	30.3	1.0	1.0
Hark	1829.5	15.8	28.0	84.0	32.3	34.5	1.0	1.0
Dare	1808.7	17.9	31.0	84.0	34.8	31.3	1.0	1.0
Bonus	1794.1	19.5	28.0	90.0	34.8	38.0	1.0	1.0
Hill	1785.8	16.3	32.0	84.0	37.3	37.3	1.0	1.0
Harosoy 63	1717.0	18.8	28.0	85.5	35.3	36.8	1.0	1.0
Bragg	1694.1	19.0	31.0	91.5	37.5	32.3	1.0	1.0
Adelphia	1589.9	17.8	28.0	84.0	30.8	38.5	1.3	1.0
Williams	1404.4	18.7	29.0	88.5	33.0	35.8	1.5	1.3
Jupiter	611.0	20.4	35.5	99.0	25.5	37.5	1.0	1.0
Grand Mean	1852.7	18.2	30.8	89.1	34.8	35.0	1.1	1.0
Standard Error	183.2	0.5	3.0	1.1	1.6	2.6	0.1	0.1
Coefficient of Variation	19.8	6.5	19.8	2.5	9.2	14.9	N.S.	N.S.
LSD (.05)	518.3	1.7	8.6	3.1	4.5	7.4	N.S.	N.S.

Region - Asia

Site - Suwan Farm

Latitude - 14° 30' N

Date planted - August 2, 1973

Amount of moisture - 385 mm

Fertilizer used (kg/ha) - N - 160 P - 87.2

Soil pH = 5.6

Country - Thailand

Cooperator - Aphrphan P. and Sumin

Elevation - 300 m

Date harvested - November, 1973



Table 53. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Darlac Province, Vietnam, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Plant Height at Maturity (cm)
V67-8	280.9	7.4	42.0	97.0	57.8
Clark 63	185.9	9.9	34.8	87.0	33.5
Hark	185.5	8.9	23.5	77.0	28.0
Lee 68	173.8	9.1	25.0	70.8	18.5
Williams	169.2	9.9	36.5	90.0	28.5
Pickett 71	165.9	8.6	30.0	81.3	21.0
Hill	157.5	9.0	35.5	87.0	24.3
Palmetto	157.1	7.3	35.5	90.0	46.0
Harosoy 63	153.4	7.8	39.0	90.0	28.8
Bonus	152.1	10.8	36.8	89.3	24.8
Semmes	148.4	8.6	33.8	78.5	19.0
No. 29	144.2	5.7	47.3	104.0	61.3
Improved Pelican	129.2	7.6	36.0	90.0	43.8
Dare	105.9	8.7	29.0	81.3	21.8
Bragg	99.6	9.0	34.5	85.0	27.5
Adelphia	75.8	8.9	39.0	90.0	20.0
Hutton	73.8	9.2	34.5	85.0	18.8
Davis	61.4	14.5	34.0	84.0	19.8
Hampton 266A	39.2	8.2	30.0	84.0	20.3
Grand Mean	139.9	8.9	34.6	86.4	29.6
Standard Error	27.5	1.9	0.6	2.1	2.9
Coefficient of Variation	39.3	43.5	3.2	4.7	3.4
LSD (.05)	77.8	N.S.	1.6	5.8	8.3

Region - Asia	Country - Vietnam
Site - IAR, Banmethuat Darlac Province	Cooperator - T. Kim-Thuy, T. Duc-Bao, and A. Hartman
Latitude - 12° 41' N	Elevation - 500 m
Date planted - August 2, 1973	Date harvested - October, 1973
Amount of moisture - 1438.6 mm	
Fertilizer used (kg/ha) - N - 40    P - 26.2    K - 50.0	
Soil type - Loamy clay	
Local varieties tested - Palmetto	
V67-8	
No. 29	
Diseases reported - Bacterial blight - <u>Pseudomonas glycinea</u>	
Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>	
Rust - <u>Phakopsora pachyrhizi</u>	
Insects identified - Army worm - <u>Spodoptera</u> sp.	

Table 54. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Central Farm, Belize, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Improved Pelican	1679.9	19.0	37.0	103.3	42.5	45.5
F62-3977	1623.2	24.3	47.0	108.0	47.0	53.3
Lucerna	1583.7	23.5	45.0	113.5	33.5	34.0
Acadian	1568.2	20.7	43.0	106.5	44.5	45.5
Davis	1514.5	22.4	34.3	99.0	28.3	30.3
Hampton 266A	1508.6	20.8	29.0	95.0	42.0	47.5
Jupiter	1507.8	17.7	35.0	100.0	36.3	39.8
Pickett 71	1502.8	20.6	30.3	103.0	40.8	44.3
Hill	1434.0	18.5	34.3	110.5	28.5	32.5
Adelphia	1426.1	20.0	30.0	102.0	38.0	42.3
Harosoy 63	1384.9	21.4	29.8	103.5	38.8	41.8
Bragg	1310.3	20.6	29.8	101.3	33.5	36.8
Dare	1300.3	19.3	31.5	104.8	31.0	35.8
Semmes	1274.8	20.7	29.0	106.5	28.5	31.3
Bonus	1263.2	15.8	29.5	110.8	40.0	47.5
Clark 63	1262.8	17.3	29.5	93.8	33.8	36.8
Hardee	1254.8	22.0	35.0	113.8	32.0	37.0
Lee 68	1161.1	22.5	29.5	108.5	34.5	36.0
Williams	1118.1	19.1	29.8	103.8	37.3	43.3
Hutton	1063.5	21.7	32.5	100.8	32.3	35.5
Grand Mean	1387.1	20.4	33.5	104.4	36.1	39.8
Standard Error	182.4	1.9	0.6	4.6	5.9	7.5
Coefficient of Variation	26.3	18.4	3.5	8.8	32.7	37.6
LSD (.05)	N.S.	N.S.	1.7	N.S.	N.S.	N.S.

Region - Mesoamerica	Country - Belize
Site - Central Farm	Cooperator - D. Cole and J. Cal
Latitude - 17° 10' N	Elevation - 200 m
Date planted - November 5, 1973	Date harvested - February, 1974
Amount of moisture - 448 mm	
Fertilizer used (kg/ha) - N - 20.2    P - 35.2    K - 67.2	
Soil type - Sandy clay loam    pH = 6.8	
Local varieties tested - F62-3977	
Lucerna	
Acadian	
Insects identified - Green stink bug - <u>Nezara viridula</u> (L.)	
Cucumber beetle - <u>Diabrotica</u> sp.	

Table 55. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Hacienda Tempisque, Costa Rica, 1973.

Variety	Yield (kg/ha)
Hardee	3359.0
Williams	3038.1
Clark 63	2821.4
Dare	2796.4
Bragg	2633.9
Adelphia	2617.2
Davis	2442.2
Hill	2396.3
Improved Pelican	2329.6
Harosoy 63	2321.3
Hampton 266A	2229.6
Jupiter	2196.3
Americana	2175.4
Hark	2104.6
Bonus	2054.6
Pickett 71	1958.7
Semmes	1925.4
Lee 68	1733.7
Lucerna	1658.7
Hutton	1633.7
Grand Mean	2321.3
Standard Error	135.4
Coefficient of Variation	11.7
LSD (.05)	383.0



Region - Mesoamerica	Country - Costa Rica
Site - Hacienda Tempisque (Guanacaste)	Cooperator - A. Pinchinat
Latitude - 10° 30' N	Elevation - 22 m
Date planted - May 28, 1973	Date harvested - August 22-September 11, 1973
Amount of moisture - 1265 mm	
Fertilizer used (kg/ha) - N - 82.5      P - 108.8	
Soil type - Sandy loam      pH = 6.2	
Local varieties tested - Lucerna	
Americana	
Diseases reported - Purple stain - <u>Cercospora kikuchii</u>	

Table 56. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Taboga, Costa Rica, 1973.

Variety	Yield (kg/ha)
Williams	3304.8
Clark 63	2905.6
Davis	2883.9
Calland	2796.4
Improved Pelican	2675.5
Bragg	2667.2
Hardee	2500.5
Pickett 71	2363.0
Lee 68	2258.8
Adelphia	2108.8
Harosoy 63	1925.4
Semmes	1821.2
Bonus	1783.7
Dare	1592.0
Hark	1579.5
Hill	1433.6
Hutton	1216.9
Hampton 266A	1216.9
Grand Mean	2171.0
Standard Error	202.1
Coefficient of Variation	18.6
LSD (.05)	571.6

Region - Mesoamerica	Country - Costa Rica
Site - Taboga, Guanacaste	Cooperator - R. Alfaro and A. Pinchinat
Latitude - 10° 21' N	Elevation - 9 m
Date planted - July 6, 1973	Date harvested - October-November, 1973
Amount of moisture - 1243.1 mm	
Fertilizer used (kg/ha) - N - 37	P - 13.08 K - 8.33
Soil type - Clay loam	
Local varieties tested - Lucerna	
Diseases reported - Root rot	
Insects identified - <u>Diabrotica</u> sp.	
<u>Spodoptera</u> sp.	
<u>Estigmene acrea</u> (Drury)	

Table 57. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Taboga, Costa Rica, 1973.

Variety	Yield (kg/ha)	Days to Flower	Days to Maturity	Plant Height at Maturity	Lodging Score
Clark 63	1587.8	27.8	92.8	36.3	1.3
Williams	1550.7	28.3	89.0	35.0	1.0
Adelphia	1549.9	27.5	94.8	31.9	1.0
Bonus	1512.4	24.5	91.3	34.8	1.0
Calland	1493.6	25.8	98.0	35.7	1.3
Cutler 71	1493.6	25.8	98.0	35.7	1.3
Hutton	1482.0	30.0	88.5	30.9	1.0
Pickett 71	1474.5	29.5	91.0	29.3	1.0
Davis	1456.1	31.8	99.3	32.2	1.0
Improved Pelican	1436.5	34.3	88.8	49.5	1.3
Hardee	1419.0	31.3	88.8	33.9	1.0
Semmes	1379.9	30.0	94.8	27.1	1.0
Harosoy 63	1304.4	26.5	82.0	34.8	1.0
Hark	1266.5	25.5	82.0	32.3	1.0
Dare	1228.6	31.0	92.5	32.2	1.0
Bragg	1228.6	30.5	83.5	34.2	1.0
Hampton 266A	1228.6	30.3	98.5	40.6	1.5
Lee 68	1209.8	27.5	83.0	27.7	1.0
Jupiter	1153.1	34.0	101.5	58.7	1.8
Hill	1134.0	32.0	83.3	31.8	1.0
Grand Mean	1379.5	29.3	90.8	35.2	1.1
Standard Error	113.0	0.7	2.0	2.6	0.2
Coefficient of Variation	16.4	4.4	4.5	14.5	
LSD (.05)	319.7	1.8	5.8	7.2	N.S.

Region - Mesoamerica

Site - Taboga, Guanacaste

Latitude -  $10^{\circ} 21' N$

Date planted - November 30, 1973

Soil type - 30% Clay    37% Sand

Insects identified - Diabrotica sp.

Country - Costa Rica

Cooperator - R. Alfaro and A. Pinchinat

Elevation - 9 m



Table 58. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Chiapas, Mexico, 1973.

Variety	Yield (kg/ha)	Days to Flower	Days to Maturity	Plant Height at Maturity (cm)
Hampton 266A	4896.2	32.0	96.0	30.3
Improved Pelican	4805.9	32.0	92.0	101.8
Williams	4639.3	25.0	96.0	59.3
Hardee	4555.9	32.0	98.0	28.8
Pickett 71	3958.7	29.0	99.0	30.5
Bragg	3930.9	29.0	99.5	30.0
Clark 63	3889.2	25.0	96.0	53.0
Hutton	3750.3	29.0	101.0	29.8
Adelphia	3680.9	25.0	96.5	50.3
Bonus	3660.0	25.0	87.0	49.5
Calland	3625.3	25.0	87.0	54.3
Semmes	3493.3	25.0	101.8	29.0
Hark	3482.9	26.0	87.0	32.3
RAD	3333.6	25.0	96.0	33.0
Harosoy 63	3076.6	25.0	96.0	34.0
Lee 68	2937.8	26.5	101.0	27.5
Davis	2903.0	32.0	97.5	30.5
Dare	2729.4	28.0	97.0	30.8
Jupiter	2597.4	32.0	97.0	42.5
Hill	2451.6	32.0	98.0	31.5
Grand Mean	3619.9	28.0	96.0	40.4
Standard Error	256.2	0.3	0.6	2.1
Coefficient of Variation	14.2	2.5	1.2	10.4
LSD (.05)	724.7	1.0	1.6	5.9

Region - Mesoamerica	Country - Mexico
Site - Chiapas	Cooperator - A. Crispin
Latitude - 14° 54' N	Elevation - 40 m
Date planted - August 24, 1973	Date harvested - December, 1973
Amount of moisture - 1418 mm	
Soil type - Clay	
Local varieties tested - RAD	
Diseases reported - Purple seed stain - <u>Cercospora kikuchii</u>	
Insects identified - Armyworm - <u>Spodoptera</u> sp.	
	Salt-marsh caterpillar - <u>Estigmene acrea</u> (Drury)

Table 59. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Tampico, Mexico, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Plant Height at Maturity (cm)
Hark	3985.9	20.4	31.0	118.0	56.8
Lee 68	3742.3	20.5	31.0	118.0	56.5
Pickett 71	3698.5	16.1	34.0	124.0	73.0
Semmes	3579.8	18.6	37.0	138.8	76.8
Clark 63	3329.9	18.7	28.5	124.0	52.0
Williams	3298.7	21.0	27.0	118.0	45.3
Bragg	3289.9	16.4	27.0	118.0	48.8
Hutton	3231.8	18.4	32.0	115.0	53.0
Davis	3120.6	19.7	25.0	118.0	42.8
Harosoy 63	2927.0	21.5	24.0	118.0	49.5
Improved Pelican	2905.7	17.6	28.0	118.0	46.0
Cutler 71	2736.4	29.6	24.0	104.0	58.0
Jupiter	2698.9	21.1	21.0	103.0	45.0
Hill	2611.5	16.5	31.0	103.0	50.3
Hampton 266A	2598.6	19.3	22.0	90.0	53.3
Bonus	2533.4	21.6	21.0	103.0	49.8
Hardee	2439.6	18.0	19.3	90.0	48.8
Calland	2349.1	19.4	24.0	104.0	48.5
Dare	2330.3	21.2	22.0	104.0	57.5
Adelphia	2299.1	12.0	38.0	118.0	91.0
Grand Mean	2984.9	19.4	27.3	112.3	55.1
Standard Error	204.2		0.6	2.5	3.1
Coefficient of Variation	13.7		4.6	4.5	11.1
LSD (.05)	577.4		1.8	7.1	8.7

Region - Mesoamerica	Country - Mexico
Site - Tampico	Cooperator - A. Crispin
Latitude - 23° N	Elevation - 50 m
Date planted - July 16, 1973	Date harvested - November, 1973
Amount of moisture - 867 mm	
Soil type - Clay	
Diseases reported - Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>	
Purple stain - <u>Cercospora kikuchii</u>	
Insects identified - <u>Diabrotica</u> sp.	
Armyworm - <u>Spodoptera</u> sp.	

Table 60. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Leon, Nicaragua, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Improved Pelican	2510.5	12.3	32.0	89.0	27.8	40.0
Pickett 71	2266.7	17.6	26.0	84.0	28.8	17.8
Bonus	2230.9	19.0	29.0	84.0	29.8	26.0
Hardee	2161.7	15.5	31.0	84.0	28.0	16.3
Semmes	2150.0	17.5	28.0	84.0	26.3	15.5
Williams	2147.1	16.0	31.0	84.0	26.0	32.5
Clark 63	2135.4	16.0	30.3	84.0	25.5	25.3
Calland	2130.4	16.5	29.0	84.0	26.0	26.5
Harosoy 63	2089.6	15.5	28.0	84.0	28.5	26.3
Dare	2057.1	16.4	31.0	84.0	27.5	18.0
Bragg	2053.7	16.2	28.0	84.0	28.8	18.8
Lee 68	2045.4	17.4	26.0	84.0	26.5	16.3
Hampton 266A	2041.2	19.4	25.0	84.0	30.0	17.3
Davis	2028.7	16.1	28.0	84.0	28.0	18.8
Adelphia	1994.1	16.6	29.0	84.0	26.0	19.5
Hutton	1852.0	17.3	28.0	84.0	28.3	17.5
Cutler 71	1850.8	17.8	32.0	84.0	27.0	23.5
Hill	1795.4	13.1	31.0	84.0	26.5	22.0
Hark	1768.7	14.8	29.0	84.0	26.8	22.5
Jupiter	1758.7	16.2	33.0	105.0	37.5	39.5
Grand Mean	2053.4	16.4	29.2	85.3	28.0	23.0
Standard Error	98.8	0.1			0.8	2.6
Coefficient of Variation	9.6	1.8			3.6	22.3
LSD (.05)	279.3	N.S.			2.4	7.3



Region - Mesoamerica	Country - Nicaragua
Site - Proyecto Adelante, Leon	Cooperator - Fermin Balerdi
Latitude - 12° 28' N	Elevation - 50 m
Date planted - January 25, 1974	Date harvested - May, 1974
Amount of moisture - 488 mm	
Fertilizer used (kg/ha) - N - 14      P - 56      K - 14	
Soil type - volcanic silt loam	
Diseases reported - <u>Macrophomina phaseolina</u> (Jupiter only)	
Insects identified - Gusano peludo - <u>Estigmene acrea</u>	
Corn earworm - <u>Heliothis</u> sp.	
Gusano medidor-Looper - <u>Pseudoplusia includens</u> (Walker)	
Gusano negro - <u>Agrotis</u> sp.	

Table 61. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Isabela, Puerto Rico, 1973.

Variety	Yield (kg/ha)	100 - Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Hampton 266A	3034.8	23.3	39.0	119.8	57.5	49.0	1.8	1.3
Hardee	2966.0	19.3	36.0	124.0	56.3	59.5	1.0	1.0
Williams	2880.6	21.0	28.0	94.0	26.5	68.8	1.0	1.0
Jupiter	2860.2	20.6	46.0	131.0	67.8	88.8	4.0	1.0
Semmes	2825.6	20.0	30.0	123.0	55.3	33.5	1.0	1.0
Hark	2795.1	16.2	28.0	89.0	30.0	59.0	1.8	1.0
Clark 63	2789.3	19.0	28.0	94.0	29.3	78.5	2.0	1.0
Pickett 71	2773.1	19.9	32.0	123.0	45.5	34.5	1.0	1.0
Davis	2741.4	18.9	37.0	119.3	59.5	74.8	1.3	1.3
Hutton	2631.4	22.0	39.0	118.5	52.5	39.3	1.3	1.3
Dare	2501.3	16.2	39.0	111.5	61.3	47.3	1.3	1.0
Harosoy 63	2372.1	16.4	28.0	89.0	28.8	66.8	2.0	1.0
Cutler 71	2370.5	16.1	28.0	89.0	28.0	73.5	1.5	1.0
Adelphia	2365.8	16.4	28.0	92.8	25.8	64.5	1.0	1.0
Lee 68	2355.5	21.4	32.0	123.0	47.5	32.3	1.0	1.0
Bragg	2353.8	19.4	30.0	120.5	53.5	44.0	1.5	1.0
Hill	2305.0	16.2	39.0	104.0	59.5	51.5	1.5	1.3
Bonus	2258.8	17.0	28.0	96.3	23.8	60.8	1.0	1.0
Calland	2032.1	16.5	28.0	98.0	27.3	72.0	1.0	1.0
Improved Pelican	1979.1	13.2	44.0	117.0	60.3	111.0	5.0	1.0
Grand Mean	2559.6	18.5	33.4	108.8	44.8	60.4	1.6	1.1
Standard Error	171.5	0.9		2.1	1.8	5.7	0.2	0.1
Coefficient of Variation	13.4	9.2		3.9	8.2	19.0		
LSD (.05)	485.1	2.4		6.0	5.2	16.2	0.5	N.S.

Region - Mesoamerica	Country - Puerto Rico
Site - Isabela Experiment Station	Cooperator - Frank J. Julia
Latitude - 18° 28' N	Elevation - 128 m
Date planted - July 2, 1973	Date harvested - October, 1973
Amount of moisture - 602.2 mm	
Fertilizer used (kg/ha) - N - 112.1 P - 73.3 K - 93.4	
Soil type - Clay	
Diseases reported - Soybean mosaic - Soybean Mosaic Virus	
Yellow mosaic - Bean Yellow Mosaic Virus	
Insects identified - Loopers - <u>Pseudoplusia includens</u> (Walker)	

Table 62. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Isabela, Puerto Rico, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower	Plant Height at Maturity
Jupiter	872.3	17.0	38.5	101.0	31.0	28.8
Hark	865.3	17.2	34.5	96.5	25.8	18.9
Harosoy 63	801.1	20.8	34.5	97.3	29.3	18.0
Bonus	779.2	20.0	35.0	99.5	26.5	17.1
Hill	772.2	16.6	38.0	96.5	31.3	20.0
Hardee	759.5	17.5	38.0	97.3	31.0	16.5
Hutton	750.9	20.5	35.8	98.8	32.5	18.4
Calland	745.5	22.2	35.0	99.5	27.8	19.0
Hampton 266A	743.3	20.1	37.0	101.0	31.5	16.3
Cutler 71	737.7	21.2	32.0	98.8	26.8	19.3
Improved Pelican	734.4	14.1	37.0	99.5	32.8	20.5
Clark 63	695.5	19.6	36.3	98.8	27.5	18.3
Dare	690.8	17.5	36.5	98.8	27.3	18.6
Williams	689.6	21.9	35.0	97.3	24.8	18.8
Adelphia	582.6	16.8	36.3	98.8	27.5	15.8
Pickett 71	571.8	18.3	37.3	96.5	31.3	15.8
Semmes	410.0	18.6	37.0	98.8	27.0	14.5
Bragg	396.7	18.6	36.3	101.0	28.5	18.0
Davis	310.9	16.1	38.0	102.5	25.5	14.7
Lee 68	189.6	17.3	35.0	98.8	24.5	13.6
Grand Mean	654.9	18.6	36.1	98.8	28.5	18.0
Standard Error	114.3	0.8	1.0	1.8	2.5	1.2
Coefficient of Variation	34.9	8.5	5.4	3.7	17.3	13.7
LSD (.05)	323.2	2.2	2.7	5.2	7.0	3.5

Region - Mesoamerica	Country - Puerto Rico
Site - Isabela Experiment Station	Cooperator - Frank J. Julia
Latitude - 18° 25' N	Elevation - 128 m
Date planted - November 28, 1973	Date harvested - March, 1974
Amount of moisture - 292 mm	
Fertilizer used (kg/ha) - N - 18.3    P - 12.0    K - 15.2	
Soil type - Clay	
Diseases reported - Soybean mosaic - Soybean Mosaic Virus	
	<u>Diaporthe phaseolorum</u> var. <u>sojae</u>
	Purple stain - <u>Cercospora kikuchii</u>
Insects identified - Sugarcane weevil - <u>Diaprepes</u> sp.	



Table 63. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Lajas, Puerto Rico, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Calland	3651.1	18.2	29.0	91.0	53.5	88.3	1.0
Bonus	3341.1	18.6	31.8	90.5	47.3	76.0	1.0
Adelphia	3242.7	16.8	30.3	90.0	53.3	77.8	1.0
Lee 68	3130.6	14.8	34.8	109.5	53.8	46.0	1.0
Harosoy 63	3107.7	16.6	30.3	89.0	44.0	80.0	1.0
Clark 63	3036.4	17.6	30.3	90.5	54.8	80.8	1.0
Williams	2965.2	18.2	30.3	90.0	53.3	72.3	1.0
Kanrich	2964.3	24.8	30.5	89.0	55.3	72.5	1.0
Dare	2920.6	12.5	35.8	90.0	53.3	65.5	1.0
Hark	2905.6	14.0	29.0	89.5	51.5	67.3	1.0
Pickett 71	2771.4	13.0	35.0	104.0	56.5	49.5	1.0
Hill	2637.6	11.9	42.5	91.0	74.0	69.5	1.5
Hutton	2428.8	13.3	36.8	114.0	52.8	58.0	1.0
Hampton 266A	2316.7	13.7	37.0	113.5	58.8	61.5	1.3
Semmes	2262.5	16.0	37.0	113.5	51.8	48.5	1.0
Bragg	2241.7	13.4	35.3	113.5	58.0	54.0	1.0
Davis	2160.4	13.7	45.0	113.8	75.3	77.3	1.0
Jupiter	1994.1	18.8	55.0	139.0	92.5	113.0	4.5
Improved Pelican	1980.0	11.4	51.0	114.5	84.0	132.0	4.3
Hardee	1696.2	11.9	44.8	114.0	75.8	78.3	1.3
Grand Mean	2687.7	15.5	36.5	102.5	60.0	73.4	1.4
Standard Error	348.6	0.9	0.8	1.6	2.9	2.9	0.2
Coefficient of Variation	25.9	12.3	4.5	3.1	9.7	7.9	
LSD (.05)	985.9	2.7	2.4	4.5	8.3	8.2	0.7

Region - Mesoamerica	Country - Puerto Rico
Site - Lajas Experiment Station	Cooperator - M. Rico B.
Latitude - 18° N	Elevation - 30 m
Date planted - June 28, 1973	Date harvested - October, 1973
Amount of moisture - 457 mm	
Fertilizer used (kg/ha) - P - 22.4	
Soil type - Clay	
Local varieties tested - Kanrich	
Insects identified - Green stink bug - <u>Nezara viridula</u> (L.)	
	Loopers - <u>Pseudoplusia includens</u> (Walker)

Table 64. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Mayaguez, Puerto Rico, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Hardee	2301.7	15.4	41.5	109.5	34.8	52.8
Jupiter	1866.6	15.9	45.0	130.5	42.0	98.3
Davis	1751.6	16.5	40.0	109.5	34.3	48.0
Hill	1715.3	17.0	38.5	97.5	38.8	47.5
Improved Pelican	1684.5	12.2	46.5	109.5	36.0	98.3
Hampton 266A	1384.4	19.1	32.3	109.5	37.0	40.0
Hutton	1256.5	19.8	33.0	116.5	34.8	39.3
Semmes	1209.0	16.1	34.0	109.5	34.8	31.8
Clark 63	1165.2	19.3	27.0	97.5	31.8	49.3
Dare	1164.4	16.7	33.5	102.5	35.0	37.0
Lee 68	1161.5	18.7	29.3	104.8	33.8	29.5
Pickett 71	1158.1	16.8	31.5	107.8	38.0	42.0
Cutler 71	1116.5	18.1	26.5	97.5	41.0	59.3
Bragg	1100.6	17.3	32.0	109.5	41.8	42.3
Bonus	1036.0	18.8	27.0	97.5	36.5	49.5
Williams	888.5	20.2	27.5	103.0	33.5	46.5
Hark	629.7	16.6	23.5	83.5	32.5	39.0
Adelphia	564.7	13.9	27.5	83.5	35.5	42.0
Harosoy 63	481.3	14.6	25.0	76.0	35.0	43.3
Calland	241.7	14.0	27.0	83.5	36.8	55.3
Grand Mean	1193.9	16.8	32.4	101.9	36.2	49.5
Standard Error	149.2	0.5	1.0	43.1	1.9	3.7
Coefficient of Variation	25.0	6.1	6.1	76.9	10.4	15.1
LSD (.05)	422.1	1.5	2.8	N.S.	5.3	10.6

Region - Mesoamerica	Country - Puerto Rico
Site - Federal Experiment Station, Mayaguez	Cooperator - E. Stone
Latitude - 18° N	Elevation - 30 m
Date planted - June 29, 1973	Date harvested - October, 1973
Amount of moisture - 847 mm	
Fertilizer used (kg/ha) - N - 56.0    P - 36.7	K - 28.0
Soil type - Clay	
Insects identified - Armyworm - <u>Spodoptera</u> sp.	

Table 65. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Mayaguez, Puerto Rico, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Jupiter	1450.3	23.8	38.3	134.3	44.3	42.5	1.0	1.3
3007	1096.4	17.8	42.3	108.8	27.8	27.0	1.0	1.8
Williams	966.6	21.3	35.3	105.3	23.3	22.0	1.0	1.0
Hill	941.4	17.3	39.3	102.8	25.0	19.8	1.0	1.0
Davis	877.1	20.0	38.5	122.5	25.3	16.0	1.0	1.0
3009	870.4	16.8	41.0	105.3	28.8	26.5	1.0	3.8
Harosoy 63	810.5	18.6	36.0	93.5	20.3	17.0	1.0	1.3
Improved Pelican	780.8	14.4	39.5	98.8	30.8	28.0	1.3	1.0
Dare	748.4	19.0	34.8	108.8	23.0	19.5	1.0	1.3
Clark 63	739.5	20.1	35.3	107.0	19.5	21.8	1.0	1.0
2002	641.9	22.7	41.0	134.3	22.5	22.3	1.0	1.0
Bragg	630.2	22.2	34.5	100.5	19.5	18.5	1.0	1.0
3008	568.2	16.1	43.3	110.5	23.3	18.8	1.0	2.8
Semmes	550.6	19.2	34.5	107.0	14.5	12.8	1.0	1.0
Hampton 266A	454.8	22.9	34.0	103.3	14.3	13.0	1.0	1.3
Bonus	441.2	21.4	35.0	108.8	14.0	14.0	1.0	1.3
Adelphia	417.6	17.9	35.0	95.3	13.8	12.5	1.3	1.0
Hutton	397.8	23.0	34.5	101.5	15.0	14.0	1.0	5.0
Pickett 71	383.2	19.3	34.3	103.3	11.8	12.8	1.0	1.3
Lee 68	234.1	20.1	34.5	96.3	12.3	12.3	1.0	1.0
Grand Mean	700.1	19.7	37.0	107.4	21.4	19.5	1.0	1.6
Standard Error	212.5	0.6	0.8	3.6	3.5	3.0	0.1	1.0
Coefficient of Variation	60.7	6.3	4.2	6.7	32.7	31.2	N.S.	N.S.
LSD (.05)	601.2	1.7	2.2	10.1	9.9	8.6	N.S.	N.S.



Region - Mesoamerica	Country - Puerto Rico
Site - Mayaguez	Cooperator - E. Stone
Latitude - 18° N	Elevation - 30 m
Date planted - January 9, 1974	Date harvested - April, 1974
Amount of moisture - 508 mm	
Fertilizer used (kg/ha) - N - 33.6	P - 14.6 K - 56.1
Soil type - Clay	
Local varieties tested - 3009	
3008	
3007	
2002	

Table 66. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Deir Alla, Jordan, 1974.

Variety	Yield (kg/ha)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Semmes	3688.2	71.8	203.0	36.8	53.8
Williams	3500.7	54.0	120.0	45.5	46.8
Lee 68	3209.0	66.0	203.0	38.0	38.8
Hampton 266A	2833.9	66.0	203.0	47.0	80.0
Bragg	2625.5	64.5	203.0	52.0	76.3
Improved Pelican	2575.5	79.0	203.0	48.3	141.3
Pickett 71	2567.2	64.0	203.0	43.5	48.8
Cutler 71	2317.1	55.0	154.0	46.8	46.3
Harosoy 63	2187.9	55.8	154.0	47.5	46.3
Dare	2021.2	67.8	154.0	44.8	45.0
Davis	1917.1	73.5	172.0	42.0	65.0
Calland	1529.5	55.0	154.0	44.8	47.5
Clark 63	1521.1	53.0	154.0	40.3	42.5
Adelphia	1266.9	51.0	154.0	38.3	49.3
Hark	908.5	54.0	130.0	34.8	39.5
Bonus	587.6	54.0	154.0	40.5	38.3
Grand Mean	2203.6	61.5	169.9	43.2	56.6
Standard Error	359.6	1.3		3.1	3.5
Coefficient of Variation	32.6	4.3		14.5	12.5
LSD (.05)	1017.3	3.7		8.9	10.0

Region - Middle East

Site - Deir Alla

Latitude - 32° 12' N

Date planted - April 9, 1974

Fertilizer used (kg/ha) - N - 16.4    P - 15.6

Soil type - silt loam    pH = 8.0

Country - Jordan

Cooperator - Nabil Katrhuda and A. Hammoudeh

Elevation - 224 m

Date harvested - September, 1974

Table 67. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Douma, Syria, 1974.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Cutler 71	1223.2	12.6	51.8	123.3	58.8	63.8	1.0	3.0
Williams	1212.7	12.4	54.3	123.5	58.8	63.8	1.0	2.0
Calland	1143.1	13.3	50.5	127.8	56.3	61.3	1.0	2.0
Harosoy 63	1010.6	12.1	46.3	125.3	55.0	60.0	1.0	4.0
Semmes	900.2	10.2	124.3	179.3	55.0	60.0	1.0	2.0
Dare	848.1	8.3	95.0	134.0	56.3	61.3	1.0	2.3
Bonus	814.7	12.1	54.3	123.8	53.8	58.8	1.0	2.0
Clark 63	808.5	10.6	52.3	124.0	53.8	58.8	1.0	2.0
Adelphia	808.5	12.5	55.0	124.5	55.0	60.0	1.0	2.0
Hark	775.2	13.0	51.8	123.0	42.5	47.5	1.0	3.0
Pickett 71	775.2	11.7	122.5	174.8	60.0	65.0	1.0	1.0
Lee 68	625.1	10.5	118.8	165.5	56.3	61.3	1.0	1.0
Hampton 266A	600.1	10.5	127.3	184.5	57.5	62.5	2.0	1.0
Davis	548.0	11.5	119.0	164.3	55.0	60.0	1.0	1.3
Bragg	421.8	9.5	124.3	180.8	56.3	61.3	2.0	1.8
Improved Pelican	275.1	8.7	142.0	192.8	50.0	55.0	2.0	1.0
Grand Mean	799.4	11.2	86.8	148.2	55.0	60.0	1.9	2.0
Standard Error	107.8	0.1	1.3	0.7	2.3	2.3		0.1
Coefficient of Variation	27.0	1.6	3.0	1.0	8.5	7.8		11.3
LSD (.05)	304.9	0.3	3.7	2.0	6.6	6.6		0.3

Region - Middle East	Country - Syria
Site - Douma	Cooperator - Ministry of Agriculture and
Latitude - 34° N	Agrarian Reform
	Elevation - 550 m
Date planted - April 25, 1974	Date harvested - September, 1974
Amount of moisture - 14 irrigations	
Fertilizer used (kg/ha) - N - 21	P - 48 K - 0
Soil type - silty clay loam	



Table 68. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Palmira, Colombia, 1973.

Variety	Yield (kg/ha)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score	Shattering Score
Jupiter	4530.1	32.5	103.0	43.8	69.3	2.0	1.0
Davis	3775.8	30.0	91.8	30.5	30.3	1.0	1.0
ICA Lili	3492.4	32.0	95.0	31.8	41.5	1.0	1.0
Bragg	3329.8	24.0	88.5	34.3	26.5	1.0	1.0
203-17-3-M	3292.3	29.0	97.0	34.3	45.0	1.3	1.0
Pickett 71	2975.6	24.0	82.0	33.8	23.3	1.0	1.0
Improved Pelican	2750.6	30.5	91.0	32.3	44.8	1.0	5.0
Hampton 266A	2708.9	24.0	91.8	32.8	23.3	1.0	1.0
Williams	2708.9	25.0	83.0	32.0	31.8	1.3	1.0
Hardee	2683.9	30.0	95.5	32.3	22.8	1.0	2.0
Hill	2625.5	30.3	87.8	32.3	25.0	1.0	1.0
Adelphia	2608.9	24.0	84.0	30.5	29.8	1.0	1.0
Hutton	2608.9	26.0	91.8	34.5	23.8	1.0	1.0
Dare	2583.9	27.0	90.3	31.8	25.8	1.0	1.0
Clark 63	2525.5	24.3	84.3	33.3	31.8	1.0	1.0
Semmes	2500.5	25.0	82.5	31.5	22.0	1.0	1.0
Harosoy 63	2325.5	22.0	78.0	31.8	28.8	1.0	1.0
Lee 68	2192.1	24.0	79.0	30.8	19.8	1.0	1.0
Hark	1800.1	22.0	78.0	29.5	27.5	1.0	1.0
Bonus	1725.3	21.0	82.0	27.8	26.5	1.0	1.0
Grand Mean	2787.2	26.3	87.8	32.6	30.9	1.1	1.3
Standard Error	142.7	0.1	1.4	0.8	1.3	0.1	1.0
Coefficient of Variation	10.2	0.9	3.0	5.1	8.4		
LSD (.05)	403.7	0.3	3.8	2.3	3.7	0.2	N.S.

Region - South America	Country - Colombia
Site - ICA, Palmira	Cooperator - L. Camacho
Latitude - 3° N	Elevation - 1000 m
Date planted - October 16, 1973	
Amount of moisture - 356 mm	
Soil type - Clay      pH = 6.5	
Local varieties tested - 203-17-3-M	
ICA Lili	
Diseases reported - Downy mildew - <u>Peronospora manshurica</u>	
Bacterial pustule - <u>Xanthomonas phaseoli</u> var. <u>sojensis</u>	
Insects identified - <u>Diabrotica</u> sp.	
<u>Bemisia tabaci</u> (Gennadius)	

Table 69. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Boliche, Ecuador, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Williams	3182.3	24.2	27.0	96.5	25.8	45.8	1.8
Lee 68	3051.0	25.2	28.3	102.8	25.8	30.0	1.0
Davis	3023.9	24.7	32.8	106.8	32.5	34.0	1.8
Hardee	2841.8	26.3	33.3	109.0	29.3	30.5	1.0
Bragg	2761.0	27.5	29.5	106.0	25.3	33.8	1.3
Clark 63	2737.2	23.2	27.0	97.8	24.3	48.8	3.5
Calland	2731.4	25.4	27.3	104.5	21.5	42.3	2.0
Dare	2675.1	23.6	31.3	104.8	32.0	32.0	1.0
Pickett 71	2673.0	23.9	29.8	104.3	23.8	26.5	1.0
Americana	2573.8	28.3	32.0	108.3	42.3	73.5	4.0
Improved Pelican	2570.1	20.2	34.3	105.3	29.8	59.0	2.5
Harosoy 63	2541.8	22.5	27.3	96.5	22.5	40.0	1.3
Hill	2519.7	23.5	33.5	103.5	34.3	38.5	2.3
Semmes	2477.2	23.6	29.3	104.3	21.0	23.3	1.0
Jupiter	2472.2	24.2	34.5	128.0	21.8	57.3	1.5
Hampton 266A	2318.8	28.2	29.3	108.5	24.8	28.8	1.0
Adelphia	2311.3	25.4	28.0	105.0	21.0	37.8	1.5
Hark	2030.0	19.5	26.5	89.0	23.0	33.5	1.3
Bonus	2015.0	23.9	27.8	100.0	22.8	34.5	1.0
Hutton	1706.6	25.9	28.0	105.5	21.3	25.5	1.0
Grand Mean	2560.7	24.7	29.8	104.3	26.2	38.8	1.6
Standard Error	222.8	0.7	0.8	1.0	1.0	2.4	0.3
Coefficient of Variation	17.4	6.0	5.4	1.9	7.3	12.6	
LSD (.05)	629.7	2.1	2.3	2.9	2.7	6.9	0.9

Region - South America	Country - Ecuador
Site - Boliche, INIAP	Cooperator - E. Calero
Latitude - 2° 20' S	Elevation - 17 m
Date planted - September 7, 1973	Date harvested - December, 1973
Amount of moisture - 302.3 mm, 6 irrigations	
Soil type - Clay	
Local varieties tested - Americana	
Insects identified - <u>Agrotis</u> sp.	
	<u>Ceratomya</u> sp.

Table 70. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Pichilingue, Ecuador, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)
Hardee	2468.0	20.5	33.0	36.5
Improved Pelican	2398.4	15.5	39.5	72.5
Hampton 266A	2362.1	23.5	41.3	37.0
Davis	2355.9	20.5	37.5	40.3
Bragg	2175.0	23.0	38.5	38.3
Jupiter	2128.8	22.3	34.5	73.8
Semmes	2101.3	19.5	35.0	28.5
Americana	2080.0	23.3	47.3	76.0
Pickett 71	1964.6	18.0	37.3	33.0
Dare	1872.0	19.3	34.0	34.5
Lee 68	1796.6	20.5	38.0	31.8
Clark 63	1759.1	19.3	33.5	41.3
Calland	1647.0	20.8	31.3	45.3
Hill	1641.6	17.8	36.3	43.3
Williams	1600.3	21.0	33.3	39.0
Hutton	1475.3	22.8	30.3	26.8
Adelphia	1443.2	18.5	33.0	37.0
Bonus	1435.3	17.5	31.5	42.3
Harosoy 63	1374.4	18.5	31.5	33.3
Hark	882.7	11.8	27.0	69.5
Grand Mean	1848.1	19.7	35.2	44.0
Standard Means	187.5	1.2	1.7	10.0
Coefficient of Variation	20.3	12.3	9.7	45.3
LSD (.05)	530.5	3.4	4.8	28.2



Region - South America

Site - Pichilingue, INIAP

Latitude - 1° 6' S

Date planted - June 28, 1973

Amount of moisture - 40 mm, irrigations

Soil type - Clay

Local varieties tested - Americana

Insects identified - Agrotis sp.

Ceratomya sp.

Country - Ecuador

Cooperator - E. Calero

Elevation - 73 m

Date harvested - September, 1973

Table 71. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at Portoviejo, Ecuador, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Hardee	4280.9	22.2	29.8	96.0	41.0	41.8	1.3
Davis	4219.6	21.5	29.0	95.8	43.0	42.5	2.0
Hampton 266A	4206.7	26.3	27.3	91.0	46.3	30.5	1.3
Bragg	4099.6	23.6	26.8	91.3	43.8	35.0	2.5
Calland	3947.9	23.8	25.3	94.0	40.8	55.3	1.8
Adelphia	3900.4	22.2	26.5	91.3	41.0	54.0	1.0
Harosoy 63	3769.5	22.5	25.3	91.3	40.3	55.8	2.8
Hutton	3636.6	25.0	27.8	92.8	36.5	27.3	1.0
Clark 63	3617.4	21.3	25.5	91.0	44.0	54.3	4.3
Semmes	3593.2	21.8	28.8	91.0	38.0	28.0	1.0
Williams	3587.8	24.0	25.5	88.8	48.8	60.8	3.0
Pickett 71	3539.9	21.9	26.8	91.3	39.0	26.5	1.0
Lee 68	3537.4	22.5	25.8	91.0	39.8	29.0	1.0
Bonus	3377.3	22.4	26.0	91.3	39.5	48.5	1.0
Improved Pelican	3360.7	20.3	33.5	96.5	38.8	76.0	5.0
Hill	3266.1	20.1	29.0	72.5	42.0	43.0	4.5
Americana	3232.7	24.2	30.0	105.3	38.3	70.8	4.0
Hark	3129.4	17.5	25.3	80.0	39.5	48.3	1.0
Dare	3003.5	20.9	27.5	83.0	41.0	35.5	1.5
Jupiter	3000.6	24.0	33.3	108.0	41.8	75.3	5.0
Grand Mean	3615.3	22.4	27.7	91.6	41.1	46.9	2.3
Standard Error	223.8	0.6	0.5	2.0	2.3	4.2	
Coefficient of Variation	12.4	5.1	3.9	4.3	11.3	17.8	45.1
LSD (.05)	633.0	1.6	1.5	5.6	N.S.	11.8	1.5

Region - South America

Site - Portoviejo, INIAP

Latitude - 1° 4' S

Date planted - August 24, 1973

Fertilizer used (kg/ha) - N - 45

Soil type - Clay

Local varieties tested - Americana

Diseases reported - Puduciones radiudores

Rhizoctonia solani

Insects identified - Agrotis sp.

Ceratomya sp.

Country - Ecuador

Cooperator - E. Calero

Elevation - 44 m

Date harvested - November, 1973

Table 72. Agronomic data, first International Soybean Variety Evaluation Experiment (ISVEX), at La Molina, Peru, 1973.

Variety	Yield (kg/ha)	100- Seed Weight (g)	Days to Flower	Days to Maturity	Canopy Height at Flower (cm)	Plant Height at Maturity (cm)	Lodging Score
Jupiter	2671.7	17.9	47.5	144.5	50.0	70.0	1.7
Davis	2390.0	16.1	35.7	110.0	12.0	38.7	1.0
Hutton	1834.1	17.4	34.2	106.2	12.7	34.5	1.0
Hardee	1730.7	13.3	38.0	104.5	10.5	35.0	1.0
Hill	1725.3	13.5	35.2	103.2	40.0	41.0	1.5
Hampton 266A	1700.3	17.6	34.5	107.5	12.0	31.5	1.0
Impr. Pelican	1594.0	10.7	41.7	104.0	36.5	48.0	1.2
Semmes	1501.1	14.8	33.2	105.7	10.2	25.7	1.0
Bragg	1476.5	16.9	32.5	105.2	12.0	34.2	1.0
Pickett 71	1409.0	15.0	31.0	102.2	11.2	25.2	1.0
Calland	1242.7	18.0	31.7	100.7	11.7	30.5	1.0
Dare	1199.4	12.6	31.2	99.0	11.0	33.2	1.0
Williams	1104.8	15.1	30.0	87.2	11.5	29.7	1.0
Bonus	1067.7	15.9	30.7	98.0	11.2	27.7	1.0
Cutler 71	1025.2	16.7	32.5	98.2	12.0	28.5	1.0
Lee 68	1009.7	15.0	31.5	101.5	10.2	24.7	1.0
Clark 63	961.8	13.6	30.2	94.5	11.5	30.7	1.0
Harosoy 63	953.1	14.8	30.0	85.2	10.2	21.7	1.0
Hark	904.7	13.4	32.2	81.7	9.7	19.7	1.0
Adelphia	758.0	13.0	30.5	90.0	10.5	22.0	1.0
Grand Mean	1413.0	15.0	33.7	101.4	15.8	32.6	1.0
Standard Error	146.9	0.5	0.7	1.4	6.0	1.7	0.1
Coefficient of Variation	20.8	6.5	4.3	2.8	75.4	10.6	19.3
LSD (.05)	415.4	1.4	2.0	4.0	16.9	4.9	0.3

Region - South America	Country - Peru
Site - La Molina	Cooperator - Departamento de Oleaginosas
Latitude - 12° 05' S	Elevation - 253 m
Date planted - February 5, 1974	Date harvested - May, 1974
Amount of moisture - 370mm irrigation	
Soil type - Sandy clay    pH = 8.1	
Diseases reported - <u>Rhizoctonia solani</u>	
Insects identified - <u>Hedylepta indicata</u> (F.)	
	<u>Tetranychus cinnabarinus</u> (Boisduval)





COUNTRY	COLOMBIA		COSTA RICA *		ECUADOR	
	PALMIRA		TABOGA		BOLICHE	
SITE						
MONTH PLANTED	10		11		9	8
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Variety						
Lucerna						
Americana				37.7	48.0	46.2
ICA Lili	42.9	22.1		39.5	19.1	20.6
203-17-3-17	45.6	20.5		24.1		
				22.5		

\* Analyses were not conducted by INTSOY.

(Continued)

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	EGYPT*		ETHIOPIA*		GHANA		INDONESIA	
SITE	BAHTEEM		AWASSA		LEGON		BOGOR*	
MONTH PLANTED	7		6		5	10	3	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
<u>Variety</u>								
Jupiter	38.6	19.5	40.8	16.6	40.5	26.2	37.9	26.9
Hampton 266A	38.3	19.8	40.2	16.3	40.4	26.3	38.0	26.6
Hutton	35.8	20.0	40.7	17.6	42.0	24.0	42.1	23.9
Impr. Pelican	37.2	20.5	40.3	17.0	39.8	25.1	40.0	25.6
Bragg	34.8	16.3	39.4	17.9	40.0	26.2	37.2	26.2
Semmes	38.3	16.2	37.7	18.8	39.9	26.0	38.3	26.5
Davis	37.3	17.8	39.3	18.6	40.5	24.0	40.3	23.8
Lee 68	36.8	18.3	39.3	18.1	41.3	24.6	38.1	25.5
Pickett 71	37.6	17.1	38.3	18.6	41.4	24.5	36.9	27.2
Dare	35.6	19.8	37.7	19.6	40.4	25.3	35.5	27.3
Hill	35.6	18.6	35.6	18.7	38.7	24.9	36.5	25.6
Bonus	49.6	21.7	45.0	16.1	38.6	26.6	39.0	26.5
Clark 63	49.6	21.9	39.1	17.6	39.3	26.0	36.0	27.8
Adelphia	48.6	20.1	36.2	18.0	36.7	27.0	37.8	27.0
Williams	47.4	20.2	39.4	16.4	41.0	25.2	40.3	25.0
Harosoy 63	47.1	20.7	40.3	15.7	38.4	25.6	37.4	25.1
Hark			40.4	15.9	36.0	26.0	38.0	26.7
Hardee			36.5	17.4	37.6	26.8	36.9	26.6
Calland			39.9	17.7	41.1	24.5	34.9	26.7
Cutler 71			37.9	18.5	39.6	25.3	36.8	26.9

(continued)

COUNTRY	EGYPT*	ETHIOPIA*	GHANA	INDONESIA
SITE	BAHTEEM	AWASSA	LEGON	BOGOR*
MONTH PLANTED	7	6	5	10
	Protein % Oil %	Protein % Oil %	Protein % Oil %	Protein % Oil %
Variety				
Rebel	54.5	17.9		
Lee	50.2	19.9		
Clark	50.8	18.2		
Hampton	51.0	19.5		
Americana				37.5
Davros				37.6
1343				37.4

\* Analyses were not conducted by INTSOY.

(Continued)

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	INDONESIA		JORDAN*		MEXICO		NICARAGUA*		PAKISTAN	
	CITAYAM		DEIR ALLA		CHIAPAS		LEON		SWAT	
MONTH PLANTED	7		4		8		1		5	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
<u>Variety</u>										
Jupiter	43.0	22.5								
Hampton 266A	41.0	26.0	28.5	22.8	33.6	31.0	40.3	22.2	39.3	22.0
Hutton	45.3	23.5			35.5	28.5	37.7	22.2	42.4	20.6
Impr. Pelican	43.3	23.5	32.4	21.3	37.1	28.2	39.3	22.8	42.2	21.0
Bragg	43.3	24.0	28.9	21.1	36.3	28.4	38.9	23.9	41.6	22.3
Semmes	42.3	25.5	33.6	20.9	33.8	30.5	37.5	23.8	41.4	22.4
Davis	44.0	24.2	32.0	20.1	33.7	29.2	40.1	22.7	40.2	22.6
Lee 68	44.0	24.0	34.0	19.4	32.6	30.7	38.7	22.8	42.8	21.8
Pickett 71	42.0	25.0	33.8	20.0	37.4	29.3	40.4	22.4	41.5	23.2
Dare	40.5	26.3	30.8	22.1	33.2	30.5	38.8	23.6	41.3	23.8
Hill	42.0	23.8			30.5	29.2	37.4	22.7	40.5	22.4
Bonus	43.2	25.3	37.3	19.5	32.9	31.5	38.2	23.2	47.6	20.5
Clark 63	43.6	23.9	36.6	18.7	32.6	31.2	37.9	23.1	45.6	22.9
Adelphia	42.0	24.6	32.2	19.4	32.4	29.4	37.9	23.1	43.4	23.0
Williams	42.7	24.6	34.7	19.3	36.3	29.5	35.3	23.9	45.9	22.4
Harosoy 63	40.5	25.1	31.5	19.8	33.3	29.8	35.6	23.5	46.5	21.1
Hark			36.1	18.7	33.2	30.7	37.4	21.2	46.4	20.9
Hardee	43.8	24.2			37.5	28.5	38.0	21.7	42.3	20.4
Calland			34.5	18.1	34.3	27.7	36.7	21.2	46.7	20.8
Cutler 71			32.6	19.1	33.6	29.0	36.9	23.2	44.6	22.0

(continued)



COUNTRY	INDONESIA		JORDAN*		MEXICO		NICARAGUA*		PAKISTAN	
SITE	CITAYAM		DEIR ALLA		CHIAPAS		LEON		SWAT	
MONTH PLANTED	7		4		8		1		5	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %

Variety

RAD					33.7	28.4				
Ringgit	43.1	20.1								
Sumbing	44.5	19.5								
No. 29	47.0	18.0								

\* Analyses were not conducted by INTSOY.

(Continued)

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	PERU*				PHILIPPINES				PUERTO RICO			
	LA MOLINA		LOS BANOS		LA GRANJA*		ISABELA*					
SITE	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
MONTH PLANTED	2		6		5		6		11			
Variety												
Jupiter	33.2	20.6	44.0	24.1			37.7	24.5	35.5	22.3		
Hampton 266A	34.2	20.6	39.5	26.2	39.0	23.4	36.5	25.3	35.2	22.1		
Hutton	33.9	20.9	42.5	24.5	38.4	12.5	37.5	24.2	36.8	21.6		
Impr. Pelican	31.8	22.5			36.8	20.9	39.3	20.9	36.9	21.4		
Bragg	35.4	21.2	39.8	26.2	38.4	20.4	36.5	25.3	34.6	22.6		
Semmes	34.0	21.9	39.3	26.2	39.8	22.2	39.1	24.7	35.2	20.6		
Davis	35.4	21.7	41.1	25.0	36.4	18.4	37.7	24.2	35.6	22.6		
Lee 68	34.5	21.9	42.1	25.0	40.3	20.6	40.5	25.6	37.1	22.1		
Pickett 71	32.3	22.5	39.0	27.0	37.5	21.4	39.2	24.7	36.9	20.0		
Dare	32.2	23.2	37.9	26.8	37.1	22.6	38.4	25.1	34.6	23.8		
Hill	31.5	22.4	40.0	24.8	33.9	20.6	39.2	23.1	36.0	21.8		
Bonus	36.7	20.7	42.4	25.2	38.4	20.8	41.1	22.6	36.8	22.4		
Clark 63	32.9	21.4	41.6	25.3	37.3	16.5	39.7	24.1	36.6	22.6		
Adelphia	31.8	21.1	40.5	24.8	36.3	17.9	38.4	24.4	35.0	20.8		
Williams	34.2	20.7	42.0	25.6	40.1	16.4	39.3	24.8	37.8	20.4		
Harosoy 63	33.2	20.3	41.6	24.6	37.5	21.4	40.2	22.5	37.4	19.7		
Hark	34.7	21.0	41.3	25.6	34.9	21.3	41.2	22.6	38.0	21.6		
Hardee	32.3	21.2	43.6	25.0	40.1	21.6	38.8	24.2	37.7	21.3		
Calland	32.9	19.2					38.8	22.6	36.5	20.5		
Cutler 71	34.1	20.0	41.5	25.2			39.3	23.9	35.2	20.8		

(continued)

COUNTRY	PERU*		PHILIPPINES				PUERTO RICO			
SITE	LA MOLINA		LOS BANOS		LA GRANJA*		ISABELA*			
MONTH PLANTED	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
	2		6		5		6		11	
Variety										
CES-434			46.0	22.2						
L-114			46.8	20.0	44.8	17.0				
TK-5					39.1	20.3				

\* Analyses were not conducted by INTSOY.

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	PUERTO RICO				SIERRA LEONE				SRI LANKA			
SITE	LAJAS*				MAYAGUEZ				NJALA			
MONTH PLANTED	6				1				6			
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Variety												
Jupiter	44.7	22.4	40.6	24.2	41.4	24.8	43.9	23.7	43.8	21.3		
Hampton 266A	41.8	25.4	42.2	22.5	41.0	26.0	42.0	25.4	39.9	25.0		
Hutton	43.4	24.2	44.2	22.2	44.0	25.0	44.5	23.5	44.0	23.1		
Impr. Pelican	44.4	23.2	43.6	22.7	41.3	24.4	47.1	23.7	43.4	23.6		
Bragg	42.4	24.4	43.7	23.2	42.0	25.5	45.5	23.4	43.7	23.2		
Semmes	44.1	24.1	42.5	24.0	41.1	26.0	45.7	23.8	43.7	25.3		
Davis	42.3	23.7	41.0	17.9	42.7	24.4	43.5	23.9	40.9	23.9		
Lee 68	46.4	23.2	43.9	22.7	44.1	23.7	45.3	23.4	43.7	23.5		
Pickett 71	44.1	23.2	51.0	22.2	42.9	25.0	44.8	23.9	43.0	24.1		
Dare	38.7	25.0	40.4	24.8	40.4	25.8	40.6	27.2	38.6	25.0		
Hill	40.8	24.0	38.4	23.4	41.7	23.1			37.4	24.3		
Bonus	44.3	23.6	44.5	22.0	44.9	22.8			41.5	26.0		
Clark 63	43.4	22.9	41.9	23.0	43.0	24.5	42.6	24.9	40.1	25.8		
Adelphia	41.6	22.9	41.6	23.2	42.7	22.8	42.0	25.7	39.2	25.6		
Williams	42.5	24.4	41.8	23.6	44.4	24.4	44.0	24.6	42.0	25.2		
Harosoy 63	41.6	24.0	43.1	21.7	45.4	22.4	42.4	25.1	39.7	25.2		
Hark	40.5	25.2			44.1	24.5	44.1	24.8	39.6	25.2		
Hardee	44.8	23.0			42.6	24.3	43.5	25.3	45.0	23.2		
Calland	42.5	23.2			45.2	21.4	44.5	23.5	42.1	23.8		
Cutler 71					42.7	24.0	44.1	24.0	39.1	24.9		

(continued)

COUNTRY		PUERTO RICO				SIERRA LEONE		SRI LANKA	
SITE	MONTH PLANTED	LAJAS*		MAYAGUEZ		NJALA		ALUTHARAMA	
		Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
	6			1		6		5	
<u>Variety</u>									
Kanrich		41.1	23.9						
2002				41.4	22.2				
3007				47.9	17.8				
3008				49.3	17.2				
3009				47.2	17.7				

\* Analyses were not conducted by INTSOY.

(Continued)



Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	SRI LANKA									
	ALUTHARAMA		ANGUNUKUL- APALESSA		BANDARAWELA		GANNORUWA			
MONTH PLANTED	10	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %
				6		11		6		10
Variety										
Jupiter	40.1	24.1	41.3	25.2	41.6	20.8	44.8	23.3	41.0	23.4
Hampton 266A	39.7	24.8	46.0	22.6	43.7	17.8	41.8	24.1	38.6	24.4
Hutton	42.2	23.8	43.8	22.6	45.1	18.4	43.1	23.2	40.3	23.8
Impr. Pelican	40.1	24.5	43.0	22.5	45.6	19.3	45.6	22.9	42.9	23.0
Bragg	40.4	23.4	44.2	23.6	45.1	18.5	39.4	24.1	38.5	23.8
Semmes	39.6	25.5	43.0	23.0	44.8	19.2	43.1	24.4	41.2	25.1
Davis	39.6	25.5	44.4	23.0	42.5	20.3	42.2	22.3	41.1	22.7
Lee 68	42.1	23.8	42.7	24.0	45.6	17.7	43.0	23.4	42.0	23.6
Pickett 71	38.7	25.0	41.2	24.5	42.9	19.0	42.8	23.2	37.3	25.4
Dare			39.3	24.2			41.9	24.1		
Hill			42.0	24.5			40.0	23.4		
Bonus			41.3	24.4			43.1	24.4		
Clark 63	40.1	25.0	40.6	24.4	45.6	19.0	41.4	24.1	38.8	23.8
Adelphia	37.3	24.9	43.4	24.0	41.2	19.1	41.7	24.3	39.8	23.2
Williams	42.2	23.8	41.3	23.5	46.7	18.3	42.5	23.8	41.0	24.2
Harosoy 63	39.2	25.1	40.0	24.6	44.7	18.6	41.6	24.4	39.7	23.4
Hark	38.9	25.4	44.7	23.0	46.8	18.6	41.3	24.5	37.9	24.9
Hardee	40.7	25.1	42.3	23.5	45.4	19.0	45.4	23.0	39.7	24.3
Calland	40.5	22.9	41.7	25.0	44.5	18.9	42.8	22.0	40.8	22.5
Cutler 71							41.5	23.7		

(continued)

COUNTRY		SRI LANKA									
SITE	MONTH PLANTED	ALUTHARAMA		ANGUNUKUL- APALESSA		BANDARAWELA		GANNORUWA		Protein %	Oil %
		Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %		
		10		6		11		6		10	
<u>Variety</u>											
TK-5		39.1	24.3			45.0	17.3			44.2	20.4
Tainung R-1		40.5	23.5			45.6	17.0			43.3	22.8
SJ-2		40.9	23.7			45.2	18.4			43.0	21.1
PB-1		42.8	21.1			48.5	15.1			43.1	20.4

(Continued)

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	SRI LANKA						TAIWAN	
	MAHA ILLUPPALLAMA			PARATHAN		RATMALAGARA	PING TUNG	
MONTH PLANTED	11			11		12	3	
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Variety								
Jupiter			41.6	23.3	34.3	29.4	39.6	25.3
Hampton 266A	43.6	24.4	38.8	24.1	36.9	26.9	35.8	27.4
Hutton	45.3	23.3	43.7	22.4	40.7	24.8	38.4	25.8
Impr. Pelican			42.4	22.9	38.4	26.8	37.7	27.3
Bragg	43.7	24.4	41.7	23.6	37.8	26.9	36.4	26.5
Semmes			40.7	25.1	39.2	26.0	35.0	27.7
Davis	44.1	23.5	40.7	23.3	36.8	26.1	39.1	24.1
Lee 68	44.7	23.3	42.6	22.7	37.0	26.8	36.8	25.1
Pickett 71	43.8	23.9	40.2	23.7	40.0	25.2	34.5	25.6
Dare	40.5	24.8						26.5
Hill	43.3	23.0						25.8
Bonus	43.1	24.5						27.3
Clark 63	42.7	24.6	38.5	24.8	36.8	27.5	38.7	24.3
Adelphia	42.4	23.5	38.4	24.5	37.7	25.6	37.1	25.0
Williams	43.8	23.7	41.7	23.7	40.4	26.2	38.2	25.8
Harosoy 63	43.1	23.6	37.3	24.5	36.2	26.6	34.8	26.0
Hark			39.4	23.9	36.6	27.1	37.8	25.9
Hardee			41.5	23.7	38.4	26.4	37.5	26.9
Calland			39.1	24.0	37.0	27.3	36.1	24.9
Cutler 71								26.0
							39.6	26.6

(continued)

COUNTRY	SRI LANKA						TAIWAN	
	SITE	MAHA ILLUPPALLAMA		PARATHAN		RATMALAGARA		PING TUNG
MONTH PLANTED	6	11		11		12		3
	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
Variety								
TK-5	45.1	22.3	43.1	21.5	38.9	25.0	40.8	22.8
Tainung R-1	44.9	21.9	42.7	21.1	38.6	23.4	39.7	23.6
SJ-2	46.1	21.0	43.1	21.7	36.0	26.2	39.6	24.6
PB-1	43.4	24.2	44.3	19.9	39.7	22.6	40.1	21.6

(Continued)

Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY	TAIWAN			TANZANIA			THAILAND				
SITE	SHANHUA			ILONGA			CHIANGMAI			KHON KAEN*	
MONTH PLANTED	3			3			12			7	6
	Protein %	Oil %		Protein %	Oil %		Protein %	Oil %		Protein %	Oil %
Variety											
Jupiter				44.4	19.3		42.9	16.1	44.8	19.7	23.9
Hampton 266A	39.0	25.4		41.0	22.1		40.9	19.1	44.9	19.2	20.9
Hutton	42.3	21.4		43.6	21.8		41.9	17.6	45.1	20.1	20.8
Impr. Pelican				43.1	21.4		44.8	15.8	43.7	21.3	21.9
Bragg	42.2	22.6		40.0	23.7		40.7	18.4	44.7	20.4	14.3
Semmes	39.7	25.6		40.0	23.1		41.0	19.1	42.7	22.1	21.6
Davis	43.0	22.0		40.5	22.4		42.3	19.0	44.7	20.2	22.2
Lee 68	42.4	23.1		40.3	21.6		37.7	19.4	44.3	21.7	8.7
Pickett 71	41.5	23.0		40.7	22.6		38.2	19.8	42.5	22.7	21.1
Dare	38.8	24.4		40.1	23.3		41.8	18.8	43.2	22.0	14.2
Hill	39.5	24.3		38.9	21.3		37.4	19.0	42.2	21.6	22.8
Bonus	41.9	24.6		40.5	22.8		47.4	16.8	46.3	20.7	16.1
Clark 63	42.8	24.9		38.8	22.3		39.0	19.6	42.1	23.4	9.9
Adelphia	39.5	24.6		39.6	21.9		39.0	19.3	44.5	20.2	8.7
Williams	43.1	23.2		39.9	23.3		42.0	18.5	45.4	20.8	23.0
Harosoy 71	39.0	24.4		41.0	21.8		42.3	18.4			23.9
Hark	40.6	25.3					43.1	18.1			23.4
Hardee	41.4	22.6					41.1	17.4	43.0	22.5	33.8
Calland							43.5	18.4	42.7	21.4	33.1
Cutler 71							40.2	19.2	42.3	21.8	21.0

(continued)





Table 73. Protein and oil analyses results for the first International Soybean Variety Evaluation Experiment (ISVEX) (cont.).

COUNTRY		THAILAND							
SITE		KHON KAEN		LOP BURI*		MAEJO*		SUWAN FARM	
MONTH PLANTED		11		8		12		8	
		Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
<u>Variety</u>									
Jupiter		41.3	24.0					41.8	24.4
Hampton 266A		42.2	21.8	39.5	20.9	32.5	20.1	40.5	25.6
Hutton		44.1	20.8	37.3	20.6	37.4	18.7	44.5	23.0
Impr. Pelican		46.3	21.4	39.5	20.6	35.9	18.5	41.8	24.9
Bragg		42.1	21.6	36.8	20.5	36.3	19.8	41.3	25.1
Semmes		40.6	23.1	40.7	20.3	35.1	20.6	40.4	25.1
Davis		42.1	22.6	38.7	21.2	38.9	19.9	39.8	25.2
Lee 68		42.4	21.6	40.3	20.6	35.9	19.7	42.1	25.6
Pickett 71		39.5	23.6	39.6	19.6	38.1	20.3	39.9	27.2
Dare		40.2	23.2	40.4	19.9	35.5	21.2	39.3	26.9
Hill		38.8	21.6	39.5	20.9	37.2	19.8	39.6	24.9
Bonus		45.7	21.7	39.9	20.2	34.0	22.0	41.7	25.5
Clark 63		42.1	21.6	39.6	20.2	34.3	21.1	40.3	25.0
Adelphia		39.9	23.1	39.4	19.9	33.9	20.8	38.8	25.7
Williams		41.4	22.6	40.3	19.2	33.0	21.1	41.8	25.7
Harosoy 63		40.9	22.1	38.4	20.9	32.2	22.4	41.6	25.2
Hark				38.9	20.6	29.4	22.4	41.3	26.4
Hardee		41.6	22.1	39.1	20.7	35.1	19.6	41.6	24.9
Calland								39.9	25.5
Cutler 71						33.2	22.5	40.5	26.2

(continued)

COUNTRY		THAILAND							
SITE	MONTH PLANTED	KHON KAEN		LOP BURI*		MAEJO*		SUWAN FARM	
		Protein %	Oil %	Protein %	Oil %	Protein %	Oil %	Protein %	Oil %
	11			8		12		8	
Variety									
SJ-1				39.3	20.4	35.5	17.2		
SJ-2		43.0	21.8	40.1	20.6	34.5	18.0		
No. 29		46.6	18.3						
No. 945		42.7	20.3						

\* Analyses were not conducted by INTSOY.









